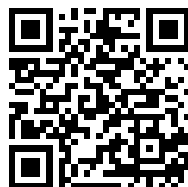

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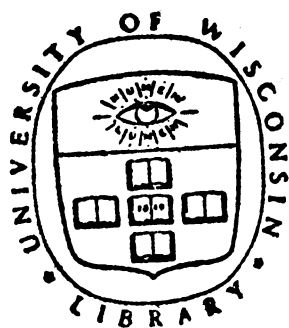


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QUEEN'S QUARTERLY.

VOL. I.

JULY, 1893-APRIL, 1894.

PUBLISHED FOR THE COMMITTEE BY
THE NEWS PUBLISHING HOUSE,
KINGSTON, CANADA.

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QUEEN'S QUARTERLY.

VOL. I.

JULY, 1893.

No. I.

All articles intended for publication, books for review, exchanges,—and all correspondence relating thereto—should be addressed to the editors, Box A, Queen's University, Kingston, Ontario.

OF making many books there is no end, said the preacher, twenty-two centuries ago. How much more may the same be said, in our day, of periodicals! It is true that they do not last very long in Canada. But, out of the ashes of every one that gives up the ghost, two or three spring into life. And why not? Every living thing wishes to voice itself, and why should the University keep silent? For a time it was hoped that the *Students' Journal* would speak to Queen's men everywhere, but the assertive student-life of to-day demands expression for itself and prefers a rapid reflection of the fleeting phases of campus and corridor to anything else. Older men prefer something more substantial and they would like to get it, in some measure, from sources reminding them of their College days. There is thus a field that the *Journal* is not cultivating, and a new magazine is needed, not to supplant but to supplement the students' paper. Those who have felt this need, desire to get into touch and to keep in touch with the men who founded Queen's and their successors; with the benefactors who have built it up to its present goodly dimensions, and the Graduates who represent it in every part of the Dominion and elsewhere; also, with their greater brotherhood in sister Universities and in all circles where the claims of the human mind are recognized as sacred. To these classes we appeal, and if they are like-minded with us, they will accept our overture and send us back a kindly greeting. We shall

thereafter let them know periodically what Queen's is doing and thinking, and we shall also try to throw some rays of light on the questions that mens' minds must always be most concerned about and give our little contribution to the great cause that every institution of learning worthy the name is seeking to serve.

No man or magazine can serve two masters, and yet what has been said may suggest that we are endeavouring to do this. We evidently wish to combine the practical end of being a bond of union between Queen's men all over the world with the unworldly desire to do our share in promoting the interests of culture in Canada. These two aims, however, are certainly not antagonistic. It must indeed be confessed that some of us would have preferred a magazine with a platform broad enough for all, and a name that would suggest no institution in particular. Others would have preferred one on which all Canadian Universities or at any rate all our Theological Colleges were represented. It is only fair to state that efforts have not been wanting to attain one or other of those results, but so far nothing has come of the efforts. It is unnecessary to inquire into the reasons or to apportion blame, if blame there has been, for we have at last come to the conclusion that it is not wise that we should wait any longer, with folded hands, while others are working hard in their own way. They, at any rate, are doing something. Perhaps Canada is not yet ripe for that general and concerted action in the field of literature, without which a really first-class periodical is out of the question. Perhaps the best prelude for such action is that each class, institution or section of the country should act independently and do its best. We shall thus learn what capital we have, and we may be able all the sooner to establish a magazine worthy of Canada and voicing its deepest thought and determined will. Till then, let each speak the thought that is in him, in words uncompromising as cannon balls, yet always with the courtesies that are now observed even in warfare.

We have few professions or promises to make. We begin modestly, intending to increase the size of the Magazine as our readers increase in number. The great majority of our

subscribers will, at the outset, be men and women who are sure to read sympathetically, because they know something of the writers or desire accurate information concerning what is being proposed or done by the University in which they are most deeply interested. But the consciousness that there is this sympathy makes it a point of honour that it should not be abused. If our *QUARTERLY* is to be successful, if it is even to survive, it must as a whole be of such a character as to be welcomed by its subscribers, not merely taken in out of a sense of loyalty or duty. This character it can gain only by being a centre of thought as well as of College news. And in order to its being a centre of thought, it cannot be an organ for the defence of any party or sect or system of opinion. Safeguards and tests have seldom helped truth. They have dulled its native force and obscured its real glory rather than commended it to truth-loving minds. Each writer then shall be free with us to speak what to him is truth, and he alone shall be held responsible for his utterances. If one side of any subject is presented, the other side also shall be heard as soon as possible. We have such faith in truth that we believe that it needs only a fair field and time. We offer the fair field, and we ask our readers to give the time. They and we alike shall be the gainers. In a word, we shall do our best to make *QUEEN'S QUARTERLY* represent the thought and life of the University, without claiming that it is in any sense its organ, but on the contrary stating explicitly that each writer takes upon himself the full responsibility for all that he writes.

THE EDITORS.

THE MIDDLE AGES AND THE REFORMATION.

THE Reformation was one of the forces which broke in pieces the whole structure of medieval civilization, and prepared the way for a new phase of development. What, then, was the general character of that earlier age from which the modern world emerged? It was, in the first place, an age in which the best and most pious minds conceived of the kingdom of heaven as incapable of being realized in this life, and therefore supposed its realization to be possible only in a future life. We can trace the gradual growth of this idea. The crucifixion of our Lord came upon his disciples as a severe trial of their faith, and there is reason to believe that for a moment their belief in his Messiahship wavered. But, as the divine life and sayings of the Master came back to their remembrance, they began to see that his kingdom was a spiritual one, which could be realized only by the destruction of evil and the substitution of righteousness upon the earth. At the same time, it seemed to them that so great a revolution could be accomplished only by a sudden and miraculous change, and thus in the Apostolic Age the Christian, imperfectly liberated from the materialism of the Jewish Messianic conception as then held, imagined that the complete triumph of righteousness would take place in a few years by the second coming of the Lord to establish upon earth the reign of peace and goodwill. Living in this faith the primitive community of Christians made no attempt to interfere with existing institutions, civil or ecclesiastical, but were content to prepare for the imminent advent of the Lord. At a later period, as that advent came to seem more and more remote, while the Christian found himself in the midst of the decaying civilization of Rome, it was natural that the conversion of the world should seem an almost impossible task. "How can these bones live?" How can this mass of corruption be transformed into the image of Christ? Moreover, try as they might to avoid collision with the secular power of the

Roman empire, the Christians found that they were not at liberty to meet together for mutual encouragement and stimulation, without drawing suspicion upon themselves as a secret society plotting the overthrow of the empire,—a fact which was burned into their souls by the persecutions of the second and third centuries. Thus the present world came to appear as a wilderness through which the little band of Christians was compelled to march, sad and solitary, on its way to the heavenly land. This sombre cast of thought never vanished from the Christian consciousness till the modern age, if it can be said to have vanished even now. One might have supposed that the more hopeful spirit of an earlier age would have come back when Christianity had by its resistless energy compelled the Roman Empire, in the person of Constantine, to make terms with it. But the inrush of the fierce northern hordes into the Roman Empire and their easy conversion to Christianity confirmed in a new way the “other-worldliness” of the Church. For Christianity, to their rude and undisciplined minds, was in all its deeper aspects unintelligible, and its doctrines could only be accepted in blind and unquestioning faith. A superstitious reverence for the Church did not restrain them from the wildest excesses of passion, and the only curb to their brutal violence and self-will was the hope of future reward or the dread of future retribution. Thus medieval Christianity, impotent to overcome the barbarism and lawlessness of the world, in a sort of despair sought comfort in the future life. This is the spirit which rules the whole of the middle ages, and it was one of the tasks of the Reformation to awaken anew the consciousness of the supreme significance of the present life, and to quicken all the institutions of society and all the powers of the individual soul with the divine spirit of Christianity.

A second characteristic of the medieval period is the belief in the absolute authority of the Church in all matters of faith and worship, and the consequent distinction between the clergy and the laity. This idea had its roots in the same principle as that which led to the conception of religion as essentially the hope of a future world. The rude

Barbarian, as I have said, could not comprehend the doctrines of the Church, nor could his self-will be broken except by a power to which he was forced to submit. Hence the Church demanded implicit faith in its teaching, and absolute submission to its authority. Nor is it easy to see how otherwise the soil could have been prepared in which the new seed of the Reformation was to grow. The discipline of the mediæval church was on the whole salutary ; but discipline is justifiable only as a preparation for the exercise of independence and reason, and hence the time inevitably came when mankind, having outgrown the stage of pupilage, asserted its claim to a rational liberty. This was the claim made by Luther when he unfurled "the banner of the free spirit."

The last characteristic of the middle ages to which I shall refer is the opposition of faith and reason. To come to its full rights as the universal religion Christianity must free itself from all that is accidental and temporary. The first step in this process of liberation was taken when St. Paul disengaged it from the accidents of its Jewish origin, and presented its essence in a clear and definite form. But the process could not end here, for every age has its own pre-conceptions and its own difficulties. When Christianity went beyond the boundaries of Judea it had to meet and overcome the dualism of Greek thought, as it had overcome Jewish narrowness and exclusiveness. This victory was only imperfectly accomplished. The reconciling principle of the essential identity of the human and divine could not be abandoned without the destruction of the central principle of Christianity, but the Church did not entirely escape the danger of making theology a transcendent theory of the inscrutable nature of God. At this imperfect stage of development Christian dogma was for a time arrested, so that when reflection arose with Scholasticism the doctrines of the Church were assumed to be expressions of absolute truth, although they contained certain mysterious and incomprehensible elements. There is indeed in the development of Scholasticism itself a growing consciousness of the antagonism of reason to the dogmas of the Church, a consciousness

which in Occam even reaches the form of a belief that they are not only beyond but contrary to reason ; but the Schoolmen never lost faith in the truth of the dogmas, though they passed from *credo ut intelligam* to *intelligo ut credam*, and ended with *credo quia impossibile*. When it thus came to be explicitly affirmed that the doctrines of the Church contained irrational elements, the beginning of the end was near ; for reason, baffled in its attempt to find unity with itself in an authoritative creed, could not be satisfied until it had transformed the creed into an image of itself. In this point of view Scholasticism may be regarded as a preparation for that reconstruction of theology, which began with the Reformation.

The Reformation initiated by Luther is based upon the simple and luminous principle, that the transition from the natural state of alienation from God to union with Him is a spiritual act, an act of faith. The divisions of medieval Christianity must therefore be annulled. If faith is a spiritual act, it is possible only through the free self-conscious activity of the individual, and therefore cannot be accomplished by the act of another. If Christ is not immanent in the soul, the sensible act of the elevation of the host can have no spiritual efficacy, and indeed contradicts the very nature of religion. Nor, again, can there be any essential distinction between one class of men and another : every man, whatever his function, be he clergyman or layman, may come into communion with God by receiving into his heart the spirit of Christ, and if he is in communion with God no external power can rob him of its fruits. Thus the whole distinction of clergy and laity as understood by the medieval church is abolished : every Christian is a priest in so far as the spirit of Christ dwells in him, and no man is a priest in whom the spirit of Christ does not dwell, no matter what his office may be. The true church is the community of Christian men, not an ecclesiastical organization. Again, faith does not consist in the acceptance of doctrines authoritatively guaranteed by the Church, but rests upon the reason as illuminated by the Holy Spirit. The evidence of faith is self-sacrificing love in the service of humanity,

and therefore the religious life must express itself in the family, the civic community and the state. Thus the Reformation, as a protest against the externality, the dualism and the superstition of the medieval church, was the beginning of a new movement in which the central principle of Christianity was re-affirmed.

Luther, however, was not fully conscious of the meaning and application of his own principle. There are two complementary aspects in which that principle may be viewed : on the one hand, it affirms the duty of private judgment, and, on the other hand, it maintains the principle of justification by faith. In the former of these aspects, the negative relation of the self-conscious subject to external authority is emphasized ; in the latter the positive relation of the subject to God as the source and principle of righteousness. Thus the individual is not merely to free himself from the enslaving influence of authority, but his emptiness is to be filled by the spiritual act in which he rises into communion with God. It is obvious, however, that the individual's consciousness of God is conditioned by the past history of the consciousness of the race. For that consciousness is not something absolutely fixed and unchangeable : on the contrary, the religious consciousness, as the principle which gives meaning to the whole of life, develops with the growing intelligence and will of humanity. Thus the claim to liberation from tradition cannot mean the claim to a merely private judgment, but only to a judgment which is one with the true nature of things. This is so far recognised by Luther, that, when he revolts from what he believes to be the false doctrine and practice of the Church, he does not suppose the private judgment of the individual to be an ultimate test of truth, but goes on to affirm that the true nature of God is revealed in Scripture. Luther, in other words, assumes that Scripture will harmonize with his own religious experience. And what his experience had revealed to him was the alienation of man from God in his immediate or natural state, the impossibility of getting rid of the consciousness of sin by conformity to an external law, and the consciousness of reconciliation and peace which comes from

the identification of man with God through faith. These three phases of his own experience were mediated by his reflection upon Scripture, and especially upon the Epistles of St. Paul. This explains why he freely rejects those books of Scripture which do not seem to him to express the principle of justification by faith. But if Luther had applied this test with absolute thoroughness, he would have had to reject much more than the epistle of James, the book of Revelations and the books of Esther and Chronicles. For faith in God receives its character from the object to which it is directed, and except by the traditional method of reading into the Old Testament Scriptures the ideas of the New, it cannot be said that faith in God has one fixed and unchanging meaning. The consciousness of God meant for the Hebrew prophet or psalmist something different from what it meant for St. Paul. No doubt in both cases it implied the apprehension of the divine principle which expresses the highest and deepest reality of existence; but the meaning of that principle was not grasped with the same fulness in the earlier as in the later age. It is the absence of this idea of development which seems to me to explain the unsympathetic way in which Luther regarded certain books of Scripture. Now, this really means that he had not completely liberated himself from tradition. He appealed indeed to Scripture, but his method of interpreting Scripture was the abstract traditional method, in which books separated by centuries are treated as if all alike contain the same fulness of revelation of God's nature. The inadequacy of such a method is obvious. The progress of biblical criticism since Luther's day makes it impossible for us to apply to Scripture the external and traditional method of interpretation. We must be prepared to recognise that there was a progressive consciousness of the nature of God, and that this advance may be traced in the literature of the old testament and even of the new. For the old method of interpretation with its double meanings, a method which was valuable in its day by suggesting the similarity of different phases of development, we must substitute the simple and natural interpretation which recent biblical

criticism enables us to give. The most convincing proof of the Christian religion lies in the truth which it contains; and what recent criticism enables us to do is to see clearly the advance which Christianity made upon the earlier Judaism of which it is the fulfilment. To one who adopts this point of view what is called "destructive criticism" will cease to be disturbing. "Truth," as Spinoza says, "shines by its own light;" and the truth of Christianity must be its own evidence. Had not Luther confused an appeal to Scripture with the appeal to a false method of interpretation, he would have seen that his own principle of private judgment demanded that the whole process of interpreting Scripture must be freed from its traditional inadequacy, just as it demanded a more radical reconstruction of the doctrine of the church than he attempted. Luther's actual method of interpretation is at once too free and too narrow: too free, because it substitutes his own imperfect interpretation for a really scientific method; and too narrow, because it fails to appreciate the process by which the religious consciousness develops.

The new consciousness of the rights of the subject as opposed to external authority exercised an influence upon Catholicism as well as upon Protestantism. This influence was shown primarily in the deliberate formulation of the Protestant and the Catholic creed by reference to each other. The controversies of the Reformation made it clear that the Protestant principle of justification by faith could not be reconciled with the Catholic doctrine of justification by works. The opposition was stereotyped in the Augsburg Confession and in the *decreta et canones* of the Synod of Trent. The ostensible aim of this Synod was simply to formulate the creed of the Church; its practical effect was to bring into prominence the points in which the Catholic system differed from the Protestant, and especially to define clearly the central doctrine of "tradition." But this was not the only result. Prior to the Reformation the ordinances of the Church were not felt as a limitation; they had the sanctity of custom and divine right; after the Reformation the consciousness of the opposition of the secular and the

religious was present in the minds of Catholic and Protestant alike. In those countries which refused Protestantism, the state has only preserved its autonomy by practically separating the religious from the secular life. In some of them, as in France, for example, a political and social interest grows up in independence of the Church. Religion becomes to the citizen a mere ceremonial. He refuses to allow it to interfere with his political and social duties, and when it attempts to do so he puts it under restrictions which make it powerless. Religion thus becomes the occupation of the "devout" and of women, *i.e.*, of those who have no direct concern in political life. Now this divorce of religion from secular life is manifestly incompatible with the Protestant idea. If in the individual conscience there is revealed a higher law than has yet found embodiment in the state, the law must find its realization objectively; the ideal must become the real. In Protestant countries there has therefore been a continual effort to purify the state by making it an embodiment of reason. That this is the logical consequence of the Protestant idea no one can doubt. The ideal is the real, and what contradicts the ideal must ultimately be annulled.

JOHN WATSON.

THE REFUGE.

(From the German of Ludwig Franke).

When sorrow round thy heart is stealing,
Deep pain that will not be gainsaid,
Seek not in haunts of men for healing,
But to the forest turn for aid.

For rocks and trees too have their token,
Their tale of pain's relentless stroke;
Lightning and storm have cleft and broken
Proud crest of rock and heart of oak.

They have no words of hope and gladness,
Like man to cheer and heal grief's smart;
Yet shall each echo voice thy sadness
And dying, linger in thy heart.

LOIS SAUNDERS.

A PRESENT TREND.

WE are passing through a period of unusual theological unrest. Beliefs that have been tenaciously held as sacred are now challenged, or abandoned as not in accord with an accurate interpretation of Divine truth. Creeds that were the product of a time of profound spiritual quickening and intellectual revival are pronounced by many to be fetters upon individual freedom, checks on the spirit of inquiry, hindrances to progress in true knowledge of the content of Scripture. Perhaps the Christian faith was never put to so severe a test as it is at the present moment. The searching lights of science, historical investigation, and philosophical criticism are being turned upon the doctrines which the Church has taught, so that if they contain any admixture of error it can scarcely escape exposure. The Church is disturbed by the adventurous speculations of some of its ablest and devoutest scholars, who are yet earnest seekers after truth; and many are looking at the situation with alarm, fearing that Christianity is being wounded in the house of its friends.

It would be well for those who are seriously disturbed at the thought of any change of mental attitude towards the accepted teaching of the Church to remember the lesson of history. History points out that there has been a steady advance in the Church's conception of Scripture truth. From age to age the Church has been gaining a more accurate point of view of the Divine word. Its interpretations of the utterances of holy men of old have been enriched by the growth of knowledge. But to this progress in apprehension of the spirit of revelation strenuous opposition has almost invariably been offered. The men who have led the way to fuller light and larger freedom from error and misunderstanding have in nearly every case been regarded as enemies of the truth, and deserving to be cast out from the community of orthodox believers. This has been the Church's shame, although it seems slow to apprehend the fact. It does well to jealously guard the heritage of truth

in its possession, but it should not forget that the content of Scripture is subject to the same law of evolution which is bringing to light the marvellous riches of thought that have been hidden in the pages of the book of nature, and therefore when its devout and learned scholars, who prize truth and righteousness as the immediate jewel of their soul, declare that the latest results of historical investigation or scientific research require us to modify long cherished convictions, to shift our ground regarding conclusions reached by more imperfect methods of inquiry, and by the aid of feebler lights, is the Church to discourage their efforts, and pronounce themselves unworthy to be members of the body of Christ? "Prove all things," said an Apostle, and so say all who love the truth. If these men find that what has been accepted as proof of venerated beliefs cannot stand the severer tests of modern scholarship, and that these beliefs must be abandoned for other convictions, ought they not to be trusted and honoured, instead of being made the objects of the Church's displeasure and condemnation? Truth cannot suffer from patient and reverent inquiry, and light from whatever quarter it comes should be hailed with joy.

The special danger to Christianity at present arises from the attempt, sincerely and earnestly made, to explain it as the necessary result of the evolution of the religious consciousness. The theory of evolution has given a great stimulus to research in various departments of thought. It is accepted by students of science as the most satisfactory explanation of the mode in which the orderly system of the universe was framed. The geologist maintains that the different strata of the earth's crust were gradually evolved from a primitive fluid mass, which itself emerged by a slow process from a previous gaseous nebula. The palaeontologist sees in the fossils found in successive geological formations a gradual progression from simple to more complex forms, and draws the conclusion that all the varieties of living creatures have sprung from a primitive organism of the lowest type by the survival of the fittest in the struggle for existence. Man is the latest and ripest product of the extended series of developments. In him the process has

reached its highest possible expression. According to this view of man's creation his primitive condition was only a little above that of the most intelligent brute, and, if he worshipped at all, the rude forces of nature must have been the objects of his devotion, or he bowed down to stocks and stones. Anthropologists are divided on this question ; some maintaining that the earliest testimony points to a worship of one Supreme Being, and others that in the oldest form of religion every object was regarded as the seat of a spirit. From this latter crude form of religion there has been a gradual evolution, and the various religious systems of the Pagan world are only different stages in one great movement of religious thought. Judaism was the highest expression of this evolutionary process. The Semitic mind had a more subtle capacity for apprehending moral and spiritual ideas than that of any other people, just as the Greeks had a more delicate perception of the ideas of the Beautiful in form and speech. But the religion of Israel is a natural product, and Christianity is but another stage in the process of development. The teaching of Jesus sprang out of Judaism, and in the hands of Paul Christianity was influenced by Roman and Greek thought. Since the Apostolic age the successive intellectual movements that have taken place have produced modifications in its temper and attitude, so that the Christianity of the nineteenth century greatly differs from that of the second or tenth. While it is a ruling force in the civilized world of to-day, it is being reacted upon by the influences of civilization, by its science, its art, its speculative theories, its industrial methods, and is undergoing a change. What the issue may be generations hence no one can foresee, but that it will be developed into something higher and better there can be no doubt.

This, it is maintained, is what the rigid application of the theory of evolution to religion leads to. But what does evolution imply ? It has been defined by the author of the "Evolution of Christianity" as a "progressive change from simple to complex forms by resident forces, and in virtue of these alone."* But this definition is defective. It fails to

*Lyman Abbott.

take account of the action of external forces. The evolution of a grain of corn into the full ear is due not merely to its potential or resident forces, but also to the energies latent in the soil and sunlight and rain. It would be more correct to say that evolution is a progressive change from simple to complex forms by internal and external forces. What are the forces, then, which have produced Christianity? Is it due to "the activity of the human intelligence alone?" Is it no more than "the unveiling in the human conscience of that which God wrote in the human soul when He made it?" Was its Founder a Teacher who possessed only great natural genius? If the record of His life be accepted there must have been in Him a force or power which did not belong to humanity. For though he was true man, His coming into the world was not similar to that of ordinary men. He was born of a virgin. After death He rose again and ascended into heaven. The testimony of Paul's four great Epistles, which are acknowledged by all critics to be historical, is that He was the Son of God in a unique sense. He asserted that His teaching would have permanent authority. It will not be superseded by any future revelations. "Heaven and earth shall pass away, but my words shall not pass away." Evolution cannot explain the Person, teaching and life of Christ. Christianity introduced a new force into the world. It immediately began to leaven the Roman empire with moral and spiritual influences that transfigured society, and invested human life with a sacredness and preciousness till then unknown. The Jewish religion had become powerless for good. Its life was strangled by an oppressive formalism. The most religious men in the Jewish Church were extortioners. They robbed widows and orphans. They were outwardly pious and inwardly vile. How, then, could the exalted moral teaching of Jesus be a necessary evolution from the codes that regulated Jewish life in His day? It was not simply a reform but a regeneration of moral sentiment that He wrought. Duty and Right were looked at from a new point of view. Love was the spirit that should rule the life of the citizens of the new Kingdom. The Epistles were not the product of the

moral and spiritual consciousness of Peter, Paul and John. They wrote under the influence of a wisdom higher than their own. They declare that they spake as the Spirit gave them utterance, "not in words which man's wisdom teacheth, but which the Spirit teacheth." That they did not arrive at their insight into spiritual things by the tentative efforts of their own genius is an unquestionable fact. The co-operation of a supernatural intelligence must be admitted, and, therefore, the theory that Christianity is the product of the evolution of the religious consciousness is untenable. Were it correct Christianity could not be looked upon as containing the final and complete expression of religious truth. As it has superseded the religion of Israel, so it in turn must give place to a more advanced and perfect system. Evolution implies progress towards an end. If that end has not been reached in the case of Christianity, and if we are to look for a more advanced spiritual teaching, from what quarter shall we expect it to be made? Nothing has been added to the sum of religious truth contained in the Canon of Scripture since the last of its writers laid down his pen. But though scholars have been laboriously bringing to light its unsearchable riches they are yet far from having attained to anything like a complete apprehension of its contents. The Christian world is only now beginning to realise the unspeakable wealth of its treasures of wisdom and knowledge. And it will afford endless scope for the interpreter's research, just as the secrets of nature will continue to furnish an inexhaustible field for investigation and discovery.

Then if Christianity be a transitory system of religious thought, if it be only the expression of the human consciousness, it cannot be regarded as authoritative. If Jesus be not a supernatural Personage, if He was not in the beginning with God, if we "should call Him divine only because He first realised in its full meaning the truth that the consciousness of God is presupposed and implied in the consciousness of self,"—as Edward Caird affirms*—if, in other words, He be only the greatest among human thinkers, excelling Plato and Kant and Hegel, can we accept His teach-

*The Evolution of Religion, Vol. II., 230.

ing as authoritative? When He declares that eternal life is conditioned on belief in Himself, that He has power to forgive sins, that He will judge the world, that He will be a living presence with His followers unto the end of the ages, can we accept his statements as carrying a weight of authority which we dare not disregard but at our peril? Unless He be Divine, greater than prophet or apostle or philosopher, the only begotten Son which is in the bosom of the Father, knowing the Father's secrets and sharing His power, we cannot. We are thus left without an infallible rule of faith and duty. We have no certainty regarding the Divine existence, or salvation from sin, or a future life. They are speculative questions and can receive an assuring answer only from the Absolute Reason in whom are hid all the treasures of wisdom and knowledge. Thus the attempt to explain Christianity as an evolution of the content of our religious nature impoverishes the world. It leaves mankind without a well-grounded hope of the hereafter. It is one of the most subtle assaults upon a truth which is fundamental to vital religion, viz., the Incarnation of the Son of God. His real Divinity is rejected in order to get rid of the supernatural, and to synthesise all knowledge under a common principle. But this is too costly a sacrifice to make in the interests of a theory. We cannot ignore or minimise facts even though a theory which claims to be the key to all knowledge should have to be discarded. To strip Christianity and its Founder of their supernatural character would be to take away that which gives them their chief value to those who are struggling against the tendencies of their disordered moral nature, and longing to enter into the richer and fuller life of spiritual freedom. That which gives strength to the religious life of the Church to-day, and an impulse to its missionary and benevolent movements, is the conviction that its Founder and Head is a Divine Person, exercising His supernatural power in its interests, and that through his co-operation and guidance it will overcome all opposition, and diffuse its benign influences over the whole earth.

DONALD ROSS,

A LECTURESHIP OF MUSIC.

I.

IT is not too great a supposition that music can be studied with increased interest in the light of the historical or developmental method. Already in many universities here and in the Old Country are established courses in music and fine art in which this method is more or less fully recognized. From the application of such a principle of study to music two main results may be expected to follow. The student will be led to discern a nation's mental, moral and religious characteristics in its treatment of sound, as clearly as in its treatment of stone, color or words. While marking that the joy of the Tyrolese, for example, carries with it the atmosphere of the Tyrol, and that the grief of the Russian has an accent distinctive of the Slav, he will also be touched through his possession of kindred hopes and sorrows. If we are to find ourselves at home in the music of a foreign people, we must, it is true, be familiar with their history; but it is not necessary to know their language, as music is a universal speech.

Besides tracing a nation's peculiarities in its music, we are able in the second place to observe that what is called the development of music is not merely a growing mastery of an art, but the record, embodied in sounds, of a people's progressing thought and life. But whatever is vital in the thought and work of any nation is of the deepest concern to all. Hence every nation, when it utters itself in harmonious sound, is giving us one strain of the "music of humanity."

It is under the belief that a true study of music will contribute to a keener sensitiveness to human joys and griefs, and through it to a fuller appreciation of the things that are pure and uplifting that the following brief music course has been prepared. The form of the course follows the plan of class-work in Queen's University.

JUNIOR OR PRIMARY CLASS.

- i. The historical interpretation of music, embracing Hebrew and Greek music, Gregorian Church music, Folk-songs and National songs.
- ii. The theory of music, including elementary instruction in harmony and manuscript exercises.

SENIOR OR ADVANCED CLASS.

- i. The historical interpretation of music, embracing an outline of the various modern schools, with a study of selected compositions, also a more special study of one modern composer.
- ii. The science of harmony continued, and manuscript exercises.

HONOR CLASS.

In this class a close examination should be made of some one of the modern schools of music, Italian, Flemish, French or German. Throughout all the classes in both ordinary and honor work the lectures should be freely illustrated by the use of instruments.

It will be seen that this course does not extend over the whole of music but over that part of it merely which falls into line with the students' other classes. It would be expected of the lecturer that he could play at least one instrument well, but instruction in the practice of music and in singing would form no part of his express college work. Students who desired to learn to sing or play would take lessons from city teachers or in some college or conservatory of music. In time arrangements might be made by which work done in music schools would count in the university, if a degree should be instituted, or work done at the university would count in music schools.

II.

With the hope of commending this proposal to the thoughtful attention of the reader, I venture upon one or two illustrations of the way in which the classes would be conducted. If these illustrations provoke any interest, they will show, although faintly, what could be done by a lecturer

who had given himself to the subject. I select for comparison a Swiss and a Russian song, both, as it happens, having for their burden a lovers' farewell meeting. Here is first of all the Swiss song.

THE SWITZER'S FAREWELL.

I leave the highlands of my birth,
Fair and lovely though they be,
I leave the dearest home on earth.
And alas ! my sweetheart, thee.

My shepherd lass, God guard you nearly,
Give me once again your hand,
Ah me ! the days will linger wearily,
In the far-off foreign land.

My pretty shepherd girl, good-bye ;
Reach to me a loving kiss ;
O'er whatsoever land I hie,
Thought of thee will give me bliss.

It must be so, my winsome girlie,
Then, I pray, do not repine ;
I come again, I say it fairly,
One year hence I will be thine.

Showing themselves under the simple words, which at first glance seem to have no distinctive characters, are some of the traits of the Swiss mountaineer. See contending in his breast his love of home and his thirst for adventure. The Swiss is not at all the typical peasant who is satisfied to watch his sheep and gaze at the stars, or the nearest mountain-top. Against one covetous potentate or another he was compelled to fight for the freedom of his land, and this necessity has made him a wide-awake patriot, discussing at his fireside the affairs of the nation. This inborn activity and also perhaps the narrow limits of his country have induced him to wander, and the Swiss guard, with their hearts in the highlands, have often given up their lives in foreign service.

Curiously as these facts are woven together in the very words of the song, it is only the music which brings out the

Swiss character fully. The words lose something of their first delicate flavour by transportation into a foreign tongue, while the chorus, the wonderful mountain *jodel*, blending grief and expectation, the sorrow of parting with irrepressible buoyancy, is untranslatable. Clear and true before your 'inward eye' comes out the mountain cottage, as the *jodel* rings in your ears. The modest girl is at the door close to her lover who, notwithstanding his sincere grief, has not forgotten to attire himself for the journey. Their simple farewell is made. She watches him as he steps down the mountain slope and once and again comes into sight. Long after he is hidden from her view, her ear catches his crisp, plaintive, exulting *jodel*. At last she goes indoors, turning her sorrow into faithful discharge of her daily work, and counting the sunsets.

Compare with this song the following song of the Russian peasant :

THE LOVERS' LAMENT.

Olis.

Lovely Minka, I must leave thee,
 Ah the parting does not grieve thee,
 Cheerless lands will soon bereave thee,
 Of thy faithful swain ;
 Dark and black will be the morrow,
 I will wander in my sorrow,
 From the hills I'll trouble borrow,
 And from every plain.

Every word of comfort scorning,
 Ne'er from thee my memory turning,
 Sighs I'll send and kisses burning,
 From a distant shore.

Us alas the months will sever.
 Shall we see each other never ?
 True be thou and faithful ever,
 Beauty, I implore.

Minka.

Olis love, dost thou forsake me ?
 Sighs and sobs will hourly shake me ,

QUEEN'S QUARTERLY.

Ah! your absence dear will make me
 Pale and sad with woe.
Daily I will grieve and nightly,
All the winds that move so lightly.
Olis, I will question rightly,
 Whether thee they know.

Songs no more to heaven sending,
I to earth my eyelids bending,
But with shouts the welkin rending,
 Thee again to see.
Though thy cheek had lost its redness,
And thy frame was bent with sadness,
Yes though maimed, my sweet, with gladness
 I would follow thee.

In this song the words, which have filtered from Russian through German into English, still convey to us some elements of the serf's mind. Until recently three-quarters of the Russian people were serfs, who, unlike the Swiss, naturally felt little attachment to their native place. Not the bubble reputation but hunger drove them from their homes, and Olis can fix no date as a limit to what he regarded as a dreary banishment from his love. The outside world is forbidding and his pain is unrelieved. But once again the music tells powerfully the same tale in its own way. Its strangely pathetic tones call up a life of grinding toil and poverty lit up only by domestic love. The unambitious Olis and his sweetheart Minka hoped merely that they might drink together the cup of humble affection, but fate intervenes, and the cup is spilled on the ground. Minka ventures to look forward, but her brightest hope is only a shadow of what might have been. Heaven help those who love and must part with no sure hope of meeting again. Heaven help them indeed if the joy, that each feels in the other's actual presence, is the only joy of their lives. In these two songs we are made to feel the difference between the music of freedom and the music of slavery.

With some diffidence I suggest another illustration of the way in which music would be taught. In the region of

higher music a striking hint of the movement of human thought can be obtained by a comparison of Handel's *Dead March in Saul* with Chopin's *Funeral March*. Of Handel's work a critic has written "The measured and decisive rhythm and the simple diatonic harmonies show that here a mighty nation mourns the death of a hero." As the boom of the music assails our ears, our imaginations call up a vast throng of people in the midst of whom is being borne the mighty dead. We hear the muffled drum and the uniform step of the mourners; we see the gorgeous ceremonial of woe. In the music of Chopin we are, so to speak, in another planet. Concerning him the critic already mentioned writes "Of Chopin's nationality (Polish) it has justly been said that its very dances are sadness intensified. * * * His music is always expressive of his individual feelings and sufferings to a degree rarely met with in the annals of the art." So in his *Funeral March*, when we embody it in a spectacle, we see a man bowed in unspeakable anguish over the loss of some one he loved. The awful void in his life is felt all the more poignantly because of the noises which reach him from the outer world, the careless laugh of a passer-by, or even the sounds of nature. Alone he sits in misery. In the last glimpse which Chopin gives us of him, he is still alone, and his heart is breaking.

Such are the facts with regard to these two musical compositions, and the question is, what do they mean? Between the date of *Saul* and that of Chopin's march lies a round century, in the middle of which took place the French Revolution and a reawakening of intellectual life in England and Germany. This great movement gave a new political and social dignity indirectly to all and directly to what we are pleased to call the masses, and a new meaning to the humbler joys and sorrows of ordinary life. Hence the scene changes from castle and tower to rustic cottage, from the lord and lady of high degree to Lucy Gray, from the public grief over the death of a distinguished patriot to the tragedy which is hidden under an every-day funeral.

This enlargement of our social and moral horizon can be seen in the literature as well as in the music of this period.

From contemporaries of Chopin we can extract many such verses as

" Since I've lost my darling one,
Power of weeping too is gone,
Though my heart with sorrow deep
Well-nigh breaks, I cannot weep."

and

" She lived unknown, and few could know
When Lucy ceased to be ;
But shé is in her grave, and, oh,
The difference to me ! "

III.

A word or two seems yet to be needed in explanation of what is now known as the historical or developmental method. This method assumes that the human mind is in course of completing itself and that we best understand the results it has attained when we see the path over which it has travelled. The children's snow-ball not only rolls along the ground but gathers up the snow, and carries in itself the history of its movement. The mind of man likewise has not only lived through a certain stretch of time, but has gathered into itself the struggles and successes of the past. We comprehend the issues of to-day when we unwind them, as it were, and see them in the process of their formation. The application of this method does not, it is true, remove all difficulties, but it at least presents them in a clear light, and when a difficulty is clearly presented it is already partly solved. We are able to see how the turmoil of an older time was once for all laid to rest and thus detect the difference between our own 'bosom serpent' and a 'sapless shade.' It is not Duncan who is in his grave and sleeps well, but the living Banquo with whom Macbeth has to deal.

The use of the historical or developmental method in the fields of literature, philosophy and theology is yielding bountiful returns. It is now no longer supposed, for example, that we are acquainted with English literature when we have read and studied the masterpieces of our language. The great dramas of Shakespeare cannot, with-

out damage to their deepest meaning, be cut away from the rest of his productions. If we are to know rightly the most mature work of Shakespeare we must lead up to it gradually ; we must try to see his mind ripening. Hence the historical method attaches a new significance to the date of publication. To think of *The Tempest* as written, let us say, before *The Merchant of Venice* would involve a complete change in our idea of Shakespeare ; it would even make a consistent idea of Shakespeare impossible.

But the history of literature is concerned with epochs as well as with men. Our conception of the Elizabethan era must be roomy enough to include not only Shakespeare but his contemporaries. Such a view should bring before us certain principles common to the most divergent minds of the group. Further, the epoch of Elizabeth melts into another and different epoch dominated by the conceptions known as Puritan. In regard to this fact the task of the literary critic is two-fold. His interpretation of the new era must be such that in it may nestle side by side men who in actual life were bitterly opposed ; and he must also reveal the inner connection between the Puritan ideals and the ideals which swayed the minds of the Elizabethans. His assumption must be that of an expanding and gathering English mind. This method and assumption are now recreating our view of English literature.

Even theology, intractable as it may be thought, gives way before the demands of this method of investigation. Some of the very liveliest theologians seem to despair of finding any way out of the present labyrinth of religious controversy except in the direction of a return to the creeds of the early Church. This movement in circles ecclesiastical is much too complex to be estimated in a single paragraph. Yet an appreciation of the true method of inquiry may place us in the way of understanding it. It will at least make us aware of the difference between the simplicity which is obtained by reaching the essence of our bewildering theological controversies, and the simplicity obtained by discarding them as irrelevant. One thing ought to be clear ; the road lies through the obstructions not away from them.

A more simple and universal creed must be found, but it will be accepted only when it is shown to be the natural fruition of what is contained in our present differences.

Philosophy too has for some time been adjusting itself to the principle of the development of consciousness. It would be extremely interesting to ask how far such a principle was to be found in the work of Herbert Spencer. But my point is already made, if, when we see how many subjects have joined the ranks of this modern method of research, we are persuaded that music also should be ordered to fall in.

S. W. DYDE.

PROSE SAYINGS OF GOETHE.

All that increases our freedom without adding to our self-control is destructive.

There is nothing more appalling than an ignorant and unenlightened activity.

Men never show their character more clearly than in what they consider ludicrous.....The ordinary man finds something ludicrous in almost everything; the contemplative man in almost nothing.

Beauty is a manifestation of secret laws of nature which are never made manifest to us in any other shape.

Man never really knows how anthropomorphic he is.

The man of action is without conscience; conscience is the characteristic of the contemplative mind.

How does a man learn to know himself? Not by reflection but only through action. Seek to do your duty and you will soon find what is in you.

The universe as it exists for reason is to be regarded as a great indestructible organism, which by its nature continually works under necessary law and subordinates all that is accidental to its own ends.

A genuine historical sense is a culture of a kind which teaches its possessor how to include the past in his estimate of contemporary excellence

C.

LITERATURE FOR THE YOUNG : NOTES ON THE HIGH SCHOOL READER.

I.

PAST AND PRESENT IN OUR SCHOOLS.

ONE of the characteristics of our age is its unflagging and tireless energy in the improvement of educational methods. A few generations back discussion on this subject was almost confined to a few theorists, whose opinions had a lazy circulation rather amongst the philosophical sects than amongst the members of the teaching profession. The latter, whether at the universities or in the schools, held on the good old path and secure in the traditions of centuries, paid little regard to what they considered dangerous or unpractical proposals of reform. But the force of the progressive spirit has proved irresistible. Criticism from different schools of literature and science has brought much of the old humanistic teaching in logic and the classics into some disrepute. The development of science with its manifold practical relation to the arts of life has made a readjustment of the old curriculum necessary. The modern languages too are forcing their way into line with those ancient monopolists, Latin and Greek. The result is that we are, alike in our colleges and schools, in a continual process of adaptation and adjustment while the place and respective value of classical, scientific, and modern language training are being gradually determined.

To the man of middle age, the merchant or lawyer who occasionally finds time to look beyond the immediate interests of his work or the universally absorbing questions of politics the constant fermentation of educational circles must be somewhat puzzling. He himself was probably brought up on the good old plan that a knowledge of Homer and Virgil and the first six books of Euclid were the principal requirements of a good education. His most serious diffi-

culty at school was the irregularity of some Greek and Latin verbs ; but he was not troubled with botany and chemistry ; he never dissected frogs, nor handled specimens of quartz or *ranunculaceæ* except in a purely unscientific way on the holidays. The dreaded name of Demogorgon, I mean philology, was hardly known to him ; indeed the now familiar and almost despised analysis of sentences was then a new method freshly devised to torture his young and innocent existence. Book-keeping instead of being painfully acquired at school, and paid for as an educational item, was absorbed by some easy and pleasantly natural process when the schoolboy became an apprenticed clerk with a salary of £10 or £15 a year.

Now-a-days all that is changed. The schoolboy's life, and the schoolmaster's also, are under the *regime* of a strict inspectorial system. The long easy hours of the afternoon which I remember we used to spend in a kind of voluntary progress through Practice, Simple and Compound Proportion, or Colenso's Algebra are divided up into fractional portions for a variety of subjects according to the authoritative prescription of the omnipotent Time-Table, deviation from which is as impossible as from the proverbial laws of the Medes and Persians. Instead of the simplicity of the course with its Latin, Greek, arithmetic, grammar, history and mathematics, and perhaps a little French, the young scholar's course now includes, of course with certain options, a number of new subjects such as botany, physics, chemistry, biology, drawing, book-keeping, shorthand and gymnastics, while the old ones have in some cases been made more difficult by the introduction of higher methods or more specific matter.

There are some who look for proportionately increased results from this growth of educational system and who do not find them. I have met men of deliberate judgment and great authority who congratulated themselves on not having been reared under this severely systematic *regime*. But in most cases I think those critics of the new system had their eye on a special kind of product, the pupil, namely, of predominantly literary faculty and imaginative powers. These we all know are apt to develop better under a free system

than under a rigid one. It is quite possible indeed they might be cramped and dwarfed by the multifariousness of the new curriculum. But the product which our educational rulers now have in view is of a different type. From the beginning he is in strict training for the battle of life, for the struggle, I mean, which commences when he leaves school to go out into the world. For this end the school curriculum is being more and more modified into a preparatory training of his faculties in the various directions likely to be directly useful to him in the actual business of the world. In short it is the instinct of democracy to secure all possible chances at the start for the children of the people which is at the root of the educational activity so characteristic of our times. The old ideal of the educationalist was the scholar, the new ideal is the citizen, that is, the successful tradesman, farmer, or engineer.

Here in Canada we are certainly not behind in the energy with which we strive to adapt our educational system to new circumstances. The activity shown in discussing and reviewing educational methods by our educational authorities and by the voluntary associations of teachers, the interest taken in such questions by all classes of the teaching profession and the evident determination to be as scientific and progressive as possible are admirable symptoms of educational vitality. In the universities and the schools alike we are constantly making and remaking our courses with a laudable readiness to secure all the advantages that system can secure. Indeed there are some who think that in this respect the fury of ambition is within us, and that we are in danger of overshooting the mark, of neglecting what is sound and profitable because it is old, and of embracing what is of merely superficial value because it is novel and seems to be systematic and progressive. With us there is so little of the healthy *vis inertiae* which is bred in old countries by the consciousness of a great past and centuries of prosperity that we are rather at the mercy of one-sided theories of education provided they be sufficiently new and imposing. At the present moment a certain amount of caution would be an excellent feature in the policy of our educational rulers.

We must separate and safeguard both in our universities and in our schools, the interests of the scholar from the encroaching ideal of a purely practical education. In educational matters mere utilitarianism is likely to miss more than it is aware of, and possibly without even securing the advantages it has in view.

II.

THE HIGH SCHOOL READER; THE OLDER AUTHORS.

But my purpose here is to discuss not the educational system of Ontario in general, but only that small part of it which is comprised in the pages of the High School Reader, a book designed to furnish matter for reading to High School pupils during the first three years of their course. This book is in many respects an excellent one and fairly reflects, in the novelty, variety and comprehensiveness of its selections, the progressive and energetic spirit of Canadian educationalists. It presents as wide a range of literature, from the writers of the 17th century to the Canadian poets of our own time, as could well be given in a book of this kind, and within that period, particularly in the latter half of it, not many important names are left out. The character of the selections is very varied and such as would have made the ancient compilers of courses of reading for the young, from the esteemed Dr. McCulloch downwards, stare and gasp. From King Solomon's prayer at the dedication of the temple, a fine specimen of antique Hebrew piety and the strong simplicity of scriptural prose to the gossip of Boswell's life of Johnson, from the grave majesty of Gibbon's historical page and the splendid rhetoric of Burke to the humour and pathos of Thackeray, even to scenes from *Pickwick* and a chapter from the life of that dashing Irish dragoon, Charles O'Malley—through all these the compiler passes with fine freedom and a taste which is thoroughly eclectic. The poetry is selected on the same generous principle. Shakespeare, Herrick, Dryden, Gray, Burns, Coleridge, Southey, Byron, Moore, even Keats, difficult for schoolboys, Præd, Macaulay, Poe, Clough, Whittier, Ten-

nyson, and a number of minor poets of to-day, Stedman, Dobson, Roberts, Mair, and Amanda T. Jones are all there. In short the compiler has sought to give the pupil a selection from the writers of the 17th, 18th and 19th centuries as nearly complete as was possible in the case of youthful readers. There is a further and in my opinion very useful application of system in the chronological arrangement of the extracts.

The merits of such a selection, its attractive variety and range of interest, as compared with the solemn dulness and limited range of the older School Readers are very obvious. As a general principle, too, it is a merit that an anthology of this kind should be as complete as possible, that is, as complete as is consistent with the immaturity of intellect and character in the class of readers for whom it is designed. But it is just here that the compiler, I think, has fallen into a grave mistake. In his endeavours to be complete and systematic, and to give us something new he has almost lost sight of the fact that his matter must be carefully selected with a view to (1) the limited mental capacity of the pupil; (2) the tone of feeling and the standard of taste which it is most desirable to cultivate in him. In regard to both these points the book, in my opinion, is faulty to a degree that must seriously embarrass the teacher. There is occasionally what seems a lack of literary judgment, or at other times a want of discretion shown in the choice of extracts. It looks as if the compiler had written down a list of all the standard writers of an epoch and had not ventured to leave any out that could possibly be represented. He has not dared for example to omit the metaphysical poetry of Emerson, (although the chief significance of Emerson lies in his prose), nor the sharply flavoured comedy of Sheridan in the *School for Scandal*, nor the wild death and love embracing lyric of Swinburne. But it is evident that this is too wide a principle upon which to make a collection for a High School Reader. Where we have so much in English literature that is the best of its kind, that is quite unexceptionable in its matter and tone of feeling, why introduce anything that is of doubtful character or value?

Perhaps the best way of showing the mixed character of this book, its freshness, freedom and variety on the one hand, and its lack of standard and selection on the other, is to notice some of the extracts as they occur. Extract No. 3 is from Shakespeare, the trial scene in *The Merchant of Venice*. It is a very suitable selection and any difficulties it may present are met by well considered suggestions in the notes at the end of the book. There may be more doubt about the suitability of No. 4, Bacon's essay *On Boldness*. It might be excellent for scholars at a more advanced stage, but for boys the unfamiliar idiom, and the thought closely packed in phrases that require a mature experience of life to realize them, may be objections. It is doubtful, too, if the Machiavellian depth and slightly cynical wisdom of this essay are precisely the best thing to present to the young mind.

No. 5, Herrick's famous lyric *On Daffodils*, supplemented by a fine stanza from Lovelace, is, I should think, very suitable.

On the other hand the extract (No. 6) from Jeremy Taylor's *Holy Living*, seems to us inappropriate. It consists of a long series of general reflections, not grouped perhaps with sufficient simplicity, and made somewhat opaque to the young mind by quaint comparisons and the veil of an earlier idiom. We hardly think, for example, that this is the idiom which it is most advantageous to teach a pupil who is just beginning to acquire a vocabulary and form a style :

No rules can make amiability : our minds and apprehensions make that : and so is our felicity ; and we may be reconciled to poverty and a low fortune, if we suffer contentedness and the grace of God to make the proportions.

I do not mean to say that this presents any great difficulty, I mean that it is written in an idiom different from that of our modern language, and therefore of less advantage for young scholars than an extract written more nearly in modern style. The same objection, in a less degree perhaps, applies to the extract (No. 10) from Lord Clarendon's *History*, the famous estimate of Lord Falkland. The somewhat archaic idiom and the unusual accumulation of facts in one

long sentence are things to be avoided in a selection of this kind. I am not sure too but, for all its apparent simplicity, there is something too subtle in the nature of this extract. The character of Falkland is a singularly delicate and complex one. He could side heartily with neither Royalists nor Parliamentarians and fell fighting for a cause which inspired him with no enthusiasm, and the success of which he rather dreaded than otherwise. To coarse partizans he appeared a trimmer; to students of human nature a singular example of a supersensitive conscience paralysing great gifts and considerable force of character. "Falkland," in the words of the late Matthew Arnold, "has for the imagination the indefinable charm of one who is and must be, in spite of the choicest gifts and graces, unfortunate—of a man in the grasp of fatality." Herein lies the whole interest and significance of the character. But all this is quite latent in the sober and reserved prose of the old historian, something that may be discerned by the advanced student as the fundamental idea of a play of Sophocles or Shakespeare is discerned by him and which requires almost a similar maturity of experience to value it. To the young pupil the piece must be a blank and somewhat uninteresting tragedy.

Extract No. 7 is a charming page from our old friend Izaak Walton, written in an exquisitely simple style, with that fascinating mixture of open air activities, the aroma of woods and fields, and the contemplative spirit, the candour and natural piety which distinguish the work of the old angler. Nor is its value diminished by the fact that it embodies one of the finest of Herbert's lyrics

Sweet day, so cool, so calm, so bright,
The bridal of the earth and sky :
The dew shall weep thy fall to-night ;
For thou must die.

Nothing better could be chosen, and we are somewhat surprised that the compiler did not feel himself impelled to select a kindred page from White of Selborne, or even from the late Richard Jefferies. It would be hard to find literature more suitable for schoolboys in its refined simplicity of style,

the character of its subject-matter and its healthy tone of feeling.

Extracts 14 and 15 are somewhat frigid examples of Steele and Addison, particularly the latter (*The Golden Scales*) in which the allegory is too elaborate for the class of readers and quite buries the genial humour of Addison in its heavy deliberate movement. Surely something lighter and clearer, some of Sir Roger's rambles in town or country would be preferable. Swift always simple, clear and concrete will find the juvenile reader more readily in his *Misjudged Hospitality* (No. 16)

In extract 17 the incoherent metaphysic and veiled agnosticism of Pope's *Essay on Man* may give the conscientious teacher some trouble. It is a question whether these defects are compensated by some well expressed moral maxims. It is to be hoped that the teacher has sufficient command of philosophy to distribute caution and praise amidst the conflicting variety of Pope's statements, and that he can explain to the bewildered intellect of schoolboys the different values of such *dicta* as

Who sees with equal eye, as God of all
A hero perish, or a sparrow fall.

And spite of pride, in erring reason's spite,
One truth is clear, *whatever is, is right*

and such truths as

Vice is a monster of so frightful mien,
As, to be hated, needs but to be seen ;

Honour and shame from no condition rise ;
Act well your part, there all the honour lies.

In extract 18 we have a well chosen passage from Hume, a description of the First Crusade, the type of historical passage suitable for a collection of this kind, the subject important and interesting, the treatment clear and concrete, the reflections comparatively simple and such as arise naturally in connection with the story. This seems to us a better type of extract than the long general discourse from Gibbon *On the Policy of the Empire* (No. 24) consisting of a

great number of general statements which can be only very imperfectly realized by the pupil who has no special knowledge of the underlying social and political phenomena.

III.

THE LATER AUTHORS.

From what has already been said the reader may now have obtained some adequate notion of the earlier part of the book. The extracts there are from the older writers, and we can appreciate the difficulty the compiler may have experienced in finding selections at once clear and simple and sufficiently modern in style—a difficulty, we fear, which he has not been able altogether to overcome. The objections to this part of the book are not really grave, and might easily be removed by more careful selection from the authors chosen. But with regard to the extracts which yet remain to be noticed the case is different. Not only is the matter in many of them of a character entirely beyond the comprehension of the young pupil, but an objection of quite a different kind may be made against some of them, the objection, namely, that the matter is morally unsuitable for him. Of course we do not mean that there is anything really immoral in these extracts. We mean only that the experience reflected in some of them is on the whole unsuitable and un instructive for the immature mind and unformed character. Without setting up any absurd standard of puritanism we think that something more appropriate might have been chosen from the Vicar of Wakefield than the description of Mrs. Primrose's matronly arts in endeavouring to entrap Mr. Thornhill into a proposal of marriage for her daughter. (Extract No. 22.) In Extract 27 also, from Sheridan's *School for Scandal*, the well-worn witticisms on marriage, the matrimonial tiff between Sir Peter and Lady Teazle, and the malicious small talk in Lady Sneerwell's drawing room, all in the light vein of old Queen Anne comedy, probably occupy the place of something more appropriate and useful.

But it may at least be said in favour of these two last mentioned extracts that their style is excellent and that

they belong to works which are classical in our literature. The extract from Southey on the other hand, *The Well of St. Keyne* (No. 34), has neither of these merits and is slightly vulgar in its style and treatment. The subject again is the traditional struggle between husband and wife for domestic rule, and there is nothing to recommend it in the flat simplicity and somewhat doggerel rhythm of Southey's lines :

If the husband of this gifted well
Shall drink before his wife,
A happy man thenceforth is he
For he shall be master for life.
But if the wife should drink of it first,
God help the husband then !

And so forth. Indeed we cannot help thinking that in general the compiler has been unfortunate in his humorous selections. We do not admire for instance his choice of Hood's *Parental Ode to my son*. The humour is of the lower comic sort, a kind of burlesque which does no harm as a momentary relaxation to the feelings of the adult, but hardly represents the sense of humor which it is most worth while to educate in the schoolboy. I can imagine a teacher of any sensitivity feeling qualms of conscience at having to read such lines as the following to a young pupil :

Untouched by sorrow and unsoiled by sin
(Good heavens ! the child is swallowing a pin !)

We may be quite sure he will meet with as much humour of this kind as is good for him in his way through the world. There is no need to inoculate him with this vein in the *High School Reader*.

But perhaps the worst because the most useless of the humorous selections is a piece from Haliburton on Metaphysics. With its references to entities and quiddities, nominalism and realism, free-will and necessity, syllogisms, first principles, sensation through images, unmateriality, Cartesianism and what not, it must be very nearly unintelligible to the schoolboy from the first sentence to the last. Yet the true humour of the piece depends on the readers having a partial conception of metaphysical ques-

tions. Indeed the true point of it is the utter incapacity of the untrained mind to comprehend the nature of a metaphysical problem. To the juvenile intellect which no more understands the nature of the question "whether the earth does really exist or whether it does not exist" than do Unce Tim or Malachi Muggs, the whole piece is an absurdity.

No doubt the compiler has felt the difficulty of obtaining suitable selections of a humorous kind. I think he might have given us more from Lowell, and even better than the piece from *My Garden Acquaintance*, where the humor is just a little forced and furious. Scott also has some fine scenes of mingled humour and pathos, in which the Scotch, now almost as much recognised as a literary dialect as the Doric of Greek tragedy, need hardly be an objection. Might not the gentle Elia too, though his humour be of a slightly quaint and paradoxical turn, furnish a delightful page or two? In poetry it is even more difficult to select, but we might well exchange Southey's *Well of St. Keyne* for Cowper's *Epitaph on a Hare* with its tender and delicate humour. The melody too, though equally simple, is of a kind much superior to Southey's.

As a matter of literary taste also, I should be inclined to omit Moore's *Come Ye Disconsolate*. The amatory and patriotic poet of Ireland is fairly well represented by the sentiment and melody of the two other poems, *Go where Glory* and *Dear Harp of my Country*; but one feels that the light bounding triple measure of Moore is rather an unfit vehicle for the solemn invitation

Come ye disconsolate, where'er you languish

Come at God's altar fervently kneel.

In truth this is not Moore's vein at all. Here he is a mere versifier.

But it is chiefly by ambition that the compiler sins. He would be all too comprehensive. He would have Thackeray and Dickens and Hawthorne and Lever and Edmund Gosse and Amanda T. Jones in his High School Reader as well as Shakespeare and Bacon, Herrick and Jeremy Taylor; nay, by the dog, he would have Plato, and we are rather surprised that the mysteries of the divine Iamblichus and at least one

vision of Swedenborg's are not included. Yes, there is actually a dialogue of Plato in this reader for schoolboys, or at least a portion thereof (The Apology of Socrates, Jowett's Translation No. 85). Plato's Apology, with its lofty speculation, simple only in appearance by the genius of its language, but in reality how far beyond the horizon of juvenile thought in its all embracing intellectual survey, even in its subtle use of Greek mythology !—" Minos and Rhadamanthus and Cæcus and other sons of God who were righteous in their own life."

After Plato we need hardly speak of the dose of metaphysical poetry from Emerson (Each and All, No. 58) or of Matthew Arnold's Rugby Chapel (No. 90) with its highly wrought and somewhat artificial style, and its gloomy depth of feeling.

O strong soul, by what shore
 Tarriest thou now ? For that force
 Surely, has not been left vain !
 Somewhere, surely, afar,
 In the sounding labour-house vast
 Of being, is practised that strength,
 Zealous, beneficent, firm !

An awkward passage for schoolboys ! The commentator finds the following note necessary : " The poet's faith in a future life seems to be based entirely upon his belief in the indestructibility of force.....yet how different from the hesitating half-belief of the poet is the assurance of a conscious, active future state of being which the believer in Divine revelation possesses." What a note for the young philosophers who have just been reading Plato ! Either Plato is of no use to them or a note of this kind is needless. We shall leave it to the compiler to decide.

Yet on this point we wish to guard against misconception of our criticism. We are not of opinion that pieces otherwise suitable should be passed over merely because they contain passages beyond the appreciation of the pupil. If the spirit and general expression of the piece be within his grasp, if it come properly within the range of his feeling and experience, though only vaguely, we may very well in-

roduce here and there something which may suggest the transcendental or infinite element in things; but the High School Reader is full of selections which appeal to the mature experience and the highly cultivated intelligence of adults alone. Such a piece of prose as the Apology of Socrates or a poem like Swinburne's Forsaken Garden (No. 101) with its vague wandering keys of feeling and sombre agnosticism must be a pure embarrassment to the teacher of boys.

The last 24 pages of the Reader are occupied by selections from minor contemporary poets. Here we know we are on delicate ground. As a rule poetry, if not the best of its kind, is of doubtful value. The selections from minor poets should therefore be of a clear and simple character, as indeed they mostly are. The ambitious poems of the minor poet are generally his poorest. His simple lyric often contains a true note.

We have perhaps said enough to show the need for a revisal of the High School Reader. But it would be unjust to conclude our criticism without a qualifying remark. The book has many of the qualities which are desirable in a collection of this kind and might, with some changes and omissions, be made an excellent Reader. The compiler has shown freedom and courage in his selections, as well as a competent acquaintance with English literature. Variety and comprehensiveness and catholicity of taste have been the ideals in the direction of which he has laboured not without success. But he has been more ambitious than is consistent with the purpose of the book, and his literary judgment is not always so sound as we could wish it to be. Indeed the work of compiling a reader of this kind is perhaps more than can be safely trusted to one man. In a case like this there is safety in the counsel of many.

JAMES CAPPON.

A PHASE OF THE SILVER QUESTION.

THERE are one or two points in connection with the present silver situation in the United States about which rather vague ideas seem to be current. Thus it seems to be commonly supposed that the U. S. Government has been using the people's taxes in payment for all its past purchases of silver. But this supposition is not correct, although, under the present circumstances, the Government is practically using the taxes, as well as some of its past accumulations of gold, to pay for the monthly purchases of silver. The explanation of such a condition of affairs is simple enough. When there is no inflation in the currency of the country the purchases of silver do not cost the people anything more than the printing of the certificates or (since the Sherman Act of 1890), the legal tenders which are given in exchange for them. But when the currency of the country becomes inflated the new purchases of silver have practically to be paid out of the taxes or, what amounts to the same thing, out of the past savings of the Government. In order to perfectly recognize this, however, a knowledge of the workings of the U. S. Treasury and of its relation to the currency of the country is required.

The U. S. Treasury is directly or indirectly responsible for the paper currency issued in the country. There are three kinds of money in the United States—gold, silver, paper. The gold in the gold dollar is worth exactly one dollar, because any quantity of gold can be converted into dollars, or any number of dollars used as gold, at the option of the owner of either. The silver in the silver dollar fluctuates in value with the price of silver, but may be considered as worth at present about 65 cents. No one, obviously, may convert silver into dollars, or have it done for him at his option. Any one may, however, use silver dollars as silver, but no one is likely to do so when he can get the same quantity of silver very much cheaper. To give the silver dollars their money value, so far above their metallic

value, the government must regulate their issue and provide for their redemption. The paper in the paper dollar also fluctuates in value with the price of that quality of paper, but the value is so small that it is hardly worth noticing. No one, therefore, may convert paper into dollars or have it done for him at his option. Anyone may, however, use paper dollars as paper, but no one is likely to do so when he can get the same quantity of paper much cheaper. To give the paper dollars their money value, so far above their paper value, the government must regulate their issue and provide for their redemption. Thus silver money and paper money are really on exactly the same footing in the United States. The silver money is made of more expensive material than the paper money, but that does not affect either of them as money, since the money value depends on the use which they serve as media of change and on the assurance that they can be converted into gold if desired. If the government could not keep its promise to exchange them for gold, then they might have to fall back upon their own value as articles of commerce, in which case, of course, the silver would be worth more than the paper.

Now since paper money and silver serve exactly the same function, and rest on exactly the same basis; and since the paper money is much more easily handled and carried about, it is used in preference to the silver and the latter is left in the Treasury vaults.

But under a strange delusion that silver money has, or is likely to have, an independent value of its own, so that the silver in a silver dollar will be worth a dollar, as the gold in a gold dollar, most of the paper money issued in the U. S. has been issued in exchange for silver, and held to represent it. Yet it has been issued, not for silver as money, but for silver as a metal. Thus in plain language, paper money, resting on a gold security and therefore having a gold value, was employed to purchase the material silver at its market value, in order to make silver money out of it, which also rests on a gold security, and therefore has a gold value. Now this is in no way different from employing paper or

silver money, as is done, to purchase a certain quality of paper in order to make paper money out of it.

In accordance with the same delusion about silver it is held that the silver dollars when made from the silver purchased with the paper money must be represented by this paper money, and therefore both the paper and the silver cannot be in circulation at once. And yet the silver will make over 50 per cent more dollars than the paper dollars which purchased it and which are to represent it, for only one silver dollar will be given for a paper dollar. So that if a man sold a ton of silver to the Treasury and received for it so many paper dollars, according to the market rate of silver, and afterwards wished to reconvert the paper into silver in order to use it as bullion, he would get back not his ton of silver but about 65 per cent of it. Where, therefore, everyone has the option of taking full value in gold or 65 per cent of that value in silver, is there anyone so stupid as to ask for silver instead of gold when he requires to make payments where paper money will not be taken at par? But, wherever the silver money will pass at its face value, so will the paper. Thus there is practically no need for the monthly purchases of silver for it does not secure the paper, nor will it take the place of it, and that is why the silver accumulates by hundreds of millions in the Treasury vaults.

Hitherto most of the paper money put into circulation through the purchase of silver has been needed to replace the National bank notes which have been withdrawn, and to meet the normal expansion of trade. But it is essential to observe that this paper money has been added to the currency, not to meet these needs, nor in any proportion to them, but solely on account of an arbitrary law requiring the treasury to purchase so much silver every month. The accidental coincidence between the increase of the currency and the need for it could not be expected to continue, so when the monthly additions were increased by the Sherman Act, and at the same time the need for additional currency lessened, it was inevitable that the unneeded paper should return for redemption and, as we have seen, no one would take silver when gold could be got. Paper money being

over-supplied became cheap, hence the gold which redeemed it became cheap, and was therefore sent abroad, where it was in demand and dearer. But the gold which goes to redeem the paper at the U. S. Treasury is obtained as taxes both now and previously, and this gold being really paid out for the silver purchases, it comes about that under the present conditions the people's taxes are being used for the purchase of silver.

The whole difficulty comes from making the increase of the currency depend, not on the needs of the country, but upon the arbitrary and compulsory purchase of a certain quantity of silver each month. It might as well have been a certain quantity of hay or dried apples, for the kind of article purchased makes no difference so long as it is simply accumulated. It is the addition to the currency which makes the difference. That addition comes, ultimately, from the government reserves of gold and being most easily disposed of is the first to leave the country.

A. SHORTT.

BROWNING.

(From Rabbi Ben Ezra.)

Not on the vulgar mass
 Called "work," must sentence pass,
 Things done, that took the eye and had the price ;
 O'er which, from level stand,
 The low world laid its hand,
 Found straightway to its mind, could value in a trice :

But all, the world's coarse thumb •
 And finger failed to plumb,
 So passed in making up the main account :
 All instincts immature,
 All purposes unsure,
 That weighed not as his work, yet swelled the man's amount :

Thoughts hardly to be packed
 Into a narrow act,
 Fancies that broke through language and escaped :
 All I could never be,
 All, men ignored in me,
 This, I was worth to God, whose wheel the pitcher shaped.

HOW TO GET MARRIED.

IN view of the number of fair graduates and lady students that now acknowledge Queen's University as their Alma Mater and look to her for light and guidance, this is above all others the most important question that can be treated of in this magazine.

Dear readers do not expect to find in these pages recipes for philtres to bring back to your sides erring lovers who have graduated and gone away, or to draw thither new and fresh admirers, nor yet secrets of occult learning by which chill December may win sunny June, or vice versa ; for such formulæ you are referred to the Science Department. Do not hope to read herein how bride and bridegroom, best man or bridesmaids, should be attired on the momentous occasion when the bonds of wedlock are being fast rivetted by priest or parson, justice or deacon. Such matters are for the political economist. We deal not with the manners in ancient days or foreign lands ; the historical editor will treat of these. We only propose to show How and When two distinct entities may be welded together into one person in the eye of the law and to the satisfaction of the lawyers—those gentlemen who keep the affairs of this sphere in order. Shudder not at the words “law and lawyers” for the law is after all the most romantic of professions, and the imagination of a lawyer (especially when preparing a bill of costs) is well nigh boundless. The Great Wizard of the North wrote not a line of his matchless novels until he had delved deep down among the fossils of Scotch law—the driest of all law ; and Dickens, and Thackeray, and Reade, and Macaulay, used up many a pen in writing legal documents ere they were fit to compose the immortal works on which their fame reposes.

Notwithstanding the widely spread belief that matrimonial alliances are made in heaven, a belief on the “lucus non lucendi” principle, and a belief which almost necessitates the further belief in the presence in the realms of the

blest of some that one would think might as well be kept out; among all Anglo-Saxon communities marriage is deemed a civil contract; yet not exactly a contract like an agreement to build a house, or make a bonnet, but a contract *sui generis*—"an institution of society founded upon the consent and contract of the parties," as Judge Story says; or as another writer puts it, "Unlike other contracts it is one instituted by God himself, and has its foundation in the law of Nature. It is the parent, not the child of civil society." (Story Conflict Laws, sec. 108n, 1 Fras. Dom. Rel. 87.) The essence of this contract consists in the consent freely given by a woman and a man able at the time to agree. Force or coercion used towards either party will invalidate the affair. One writer says, "matrimony contracted in consequence of menace or impression of fear, is null and void *ipso jure*; that is such a fear as may reasonably happen to a man or a woman of good courage, constancy and resolution, and such as involves some danger of death, or else of some bodily torment or distress." Butt, an English judge, has lately gone a little further and remarks, "whenever from natural weakness of intellect or from fear—whether reasonably entertained or not—either party is actually in a state of mental incompetence to resist pressure improperly brought to bear, there is no more consent than in the case of a person of stronger intellect and more robust courage yielding to a more serious danger." (Poynter on Mar. and Div. 2nd. ed. 138; *Scott v. Sebright*. 12 P.D. at p. 24.) It would be very unwise, therefore, for any young lady to make a dead set upon any eligible *parti* and intimidate him into matrimony by threatening imprisonment or such like dire inflictions, for though in such a case the lips of the timid and frightened male murmur assent to the all important "Wilt thou," yet neither mind nor heart consenting, Justice and Right will rescue the entrapped one and put asunder those thus joined together. (*Collins vs. Collins*, 2 Brews, (Pa) 575). Mere unwillingness, some degree of reluctance, a show of masculine modesty, a refusal to take the hand of the bride, holding his peace (perhaps his last until he gains the quiet of the grave), will not, how-

ever, enable the bashful swain to reconsider the matter after the justice or parson has performed the ceremony in the presence of parents of the bride and a conservator of the public peace who had the good man in charge, or any other man (*Jackson vs. Winns*, 7 Wendell 47,) and voluntarily taking up housekeeping or going into board together, after the cause of intimidation has been removed, will have the effect of making perfectly good (so far as law is concerned) a marriage, at first invalid because brought about by force. (*Hampstead vs. Plaiston*, 49, N.H. 34).

Chancellor Boyd, in speaking lately of the case of a Lawless youth who wished to be relieved from the bonds of holy wedlock, said: "Granting that evidence of intimidation may be found at one point of time during the transaction, that is not enough. It must be manifest that force preponderated throughout, so as to disable the one influenced from acting as a free agent"; and his Lordship considered that any perturbation of mind must surely have disappeared before the youth was found seated, with his hat on, smoking a cigarette and informing the clergyman of his readiness to participate in the solemnization of holy matrimony by saying "let it sliver." (*Lawless vs. Chamberlain*, 18 Ont. Rep. 296). In one case where a guardian of a young and timid school-girl, who had great influence over her, took her to a foreign county, hurried her from place to place, and then married her without her free consent, the union was set aside; and a similar result attended the marriage of another school-girl to her father's coachman, who entrapped her while taking her out to ride. (*Harford vs. Morris*, 2 Hag. Con. 423; *Lyndon vs. Lyndon*, 69 Ill. 43).

Fraud will vitiate a marriage if it goes to the very essence of the contract. Schouler tells us that the marriage relation is not to be disturbed for trifles, nor can the cumbersome machinery of the courts be brought to bear upon impalpable things. The law makes no provision for the relief of blind credulity, however it may have been produced. Fraudulent misrepresentations as to birth, social position, fortune, good health and temper, do not vitiate the contract. The lady who thinks she is marrying an Italian noble but

finds herself wedded to an organ-grinder can have no relief ; "Caveat emptor", saith the law. Love, however indispensable in an æsthetic sense, is by no means a legal essential to marriage ; simply because it cannot be weighed in the scales of Justice. In England an unfortunate man once courted and afterwards married a young lady, believing her to be a certain rich widow, whom he had known only by reputation. She and her friends had countenanced the deception. Yet it was held that the marriage must stand. But the palpable substitution of some other individual for the dear one actually accepted and intended for marriage may be properly and successfully repudiated by the victim of the plot. (This decision, if it had been rendered a millennium or so earlier, would probably have delighted the Patriarch Jacob when the weak-eyed Leah was foisted off on him, instead of his dearly loved Rachel). Some cases have gone so far as to have the marriage set aside when a scoundrel palms himself off as a certain person of good repute. (*Rex vs. Burton*, 3 M. & S. 737—Schouler Dom. Rel. sec. 23). A marriage entered into while one of the parties is so intoxicated as to be incapable of understanding what he or she is about is voidable only, and may be ratified and confirmed. It may be consolatory to some to know that a combination among persons friendly to the lady to induce a man to marry her, if she has done nothing to lead her friends to do any improper act to bring about the man's consent, apparently will not avoid the marriage. (*Roblin vs. Roblin*, 28 Grant 489).

And now comes the great question, will a marriage, entered into with the entire concurrence of those most deeply interested, be valid and binding if all rites and ceremonies and preliminaries, religious or otherwise, are absent ? Other queries are connected with this one, such as, can parties marry themselves, or must they call in the assistance of a third party ? Are witnesses necessary, or can all be rightly and duly done without witnesses ? These questions touch the pockets of all marriageable and marrying "forked radishes with heads fantastically carved," whose business it is to fee, handsomely or otherwise, as the spirit or circum-

stances may move them, the officiating priest or magistrate, should one be employed. Nay more, it affects the pockets of all interested ; for clothes, which—as Carlyle says—give us individuality, distinction, social polity ; which have made men and women of us ; which are threatening to make clothes screens or scare-crows of us, cost money, especially at such times.

The veriest freshie among our lady readers knows the requirements of the Ontario law on this subject—a proclamation of banns, if High Anglican or Roman Catholic ; a license, if you are neither, and not a Quaker, and all the presents, display of dry goods and millinery, pomp and circumstance of show available, and a beloved pastor, priest or parson to pronounce the magic words. So delay over Ontario practice is unnecessary.

Across the line in the neighboring Republic there is a most pleasing diversity of law and custom. In Arizona, no ceremony whatever is necessary to constitute a valid marriage : all persons who were living together in that Territory on a certain date in 1887 as husband and wife and continued to do so for a year afterwards, or until the death of one party, were declared to be lawfully married. In South Carolina there must be three witnesses at least to make things binding. Maine is the only State where a woman is authorized to act as a celebrant at a wedding. In Pennsylvania, the marriage contract may be put in writing, signed by the parties and witnesses, and put on record, exactly like the deed of a piece of land. In Alabama, California, Georgia, Idaho, Illinois, Iowa, Michigan, Missouri, New York, Dakota, Ohio, Pennsylvania and South Carolina, a man and woman have a right to marry themselves (unless that right has been expressly taken away by statute) notwithstanding the law declares that a minister, priest or magistrate shall perform the ceremony. On the other hand, in Maine, Maryland, Massachusetts, North Carolina, Tennessee, Connecticut, Delaware and Kentucky, parties are not allowed to marry themselves. (43 Alb. Law Journal, page 370). In New York marriage is very easy, although divorce is difficult. A man and a woman without going before a

minister or magistrate, without the presence of any person as a witness, with no previous public notice, with no form or ceremony, civil or religious, and with no record or written evidence of the act, and merely by words of the present tense, may contract matrimony in the Empire State. Once upon a time a couple in that State were engaged to be married; the male entertained the notion that marriage ceremonies were vanities of vanities, empty show, vain delusions, unnecessary expenses; in fact, he said decidedly that he did not believe in them, and expressly desired that his would-be mate should forego such performances, especially as a marriage without them would be all sufficient. She hesitated; the pomps and vanities of this wicked world and the flesh pots of Egypt had a strong hold upon her heart, but at last she gave way to his wishes and named the hour which was to see them twain become one flesh. On that eventful day they went out riding together in a carriage and while rolling smoothly on he produced a ring, and, placing it upon her finger, said: "This is your wedding ring; we are married." She received the circlet of gold as the sign of wedlock, and he then further remarked: "We are married; I will live with you, and take care of you, all the days of my life, as my wife." She made no objection to the pleasant programme thus sketched out for her future life, and together they drove to a house where he had previously engaged board for "himself and wife." There they lived together for over a month, he treating her and speaking of her and to her as his wife. Soon, sad to relate, a change came over the spirit of their dreams; we seek not to lay the blame at the door of either, but a divorce was sought for, and the Superior Court of the State held and declared that this simple and uncommon marriage was perfectly valid. (*Bissell vs. Bissell*, 55 Barb. 325; 7 Abb. (N.Y.) Pr. U.S. 16).

In Mississippi it has been held that to make a lawful marriage nothing more is needed than that in language which both of the contracting parties understand, be it English, Irish, or Dutch, or in words declaratory of their intention, they accept one another as husband and wife;

and if the words used do not, in their ordinary meaning or common use "conclude matrimony," yet if the man and the woman intend marriage and their intent is sufficiently manifest, they become inseparably welded together until—as Samuel Smiles says—ill-cooked joints and ill-boiled potatoes, calling in the aid of a divorce court, put them asunder. Their consent to enter into the holy state may be expressed either in writing or orally. (*Dickenson v. Brown*, 49 Miss. 357). Schouler tells us that to constitute a marriage where there are no civil requirements, or in other words to constitute an informal marriage, words clearly expressing mutual consent are sufficient without other solemnities. Two forms of consent are known to the law: the one consent *per verba de presenti*, with or without actual co-habitation: the other consent *per verba de futuro*, followed by co-habitation. This being interpreted means that a marriage entered into by words signifying the intention of having a wedding then and there, and the parties then continuing to live together or even separating; and one entered into by words expressive of a determination to have a marriage some day or other, followed by the parties dwelling together as husband and wife are (where no civil requirements exist) valid and binding. Such informal marriages were sufficient according to the English Canon Law before the Council of Trent, and perhaps were so under the Common Law and still are under the law of Scotland. (Schouler sec. 26).

In the great majority of the States of the Union words in the present tense (one sees now an advantage in the study of grammar, not apparent before) uttered for the purpose of affecting a matrimonial alliance, are all that are required, there need be no ceremonial of any kind. There is, however, a certain amount of uncertainty about these informal marriages. Maggie Wilson found this out; her father was a fishing-tackle maker of Edinburgh; a baronet of forty and a bachelor, whose habits were rather dissolute, was intimate with the family. One winter's evening the baronet was enjoying himself with a champagne supper at the Wilson abode. The old gentleman made some remarks about the gossip that was abroad over the baronet's fre-

quent visits; the latter said he would shut the people's mouths, that he was poor and could not marry now, but would marry after Scottish fashion. Then kneeling before one of the daughters, Maggie, a fair damsel of sweet sixteen, he took a ring out of his pocket, placed it upon her third finger, saying, "Maggie, you are my wife before heaven, so help me God." The girl exclaimed, "Oh, Major," threw her arms around his neck and kissed him. The health of the young couple was drunk by all present, and they were "bedded" according to the old Scotch fashion. They lived together for some weeks after this celebration, and then met at various times, but there was no continuous cohabitation. Some two and a half years afterwards the gallant Major died, and then Maggie sought to have the son, that had meanwhile appeared, declared heir. The Court of Sessions said she was a true wife, but the House of Lords chose to differ and say she was not, and the Lords reached this decision mainly upon circumstantial proof that both parties by their behavior after the ceremony repudiated its force and that neither in fact had been in earnest, although doubtless the ultimate maturing of matrimony had been hoped for and confidently anticipated by Maggie and her friends. (*Stewart vs. Robertson*, L.R., 2 H.L., Sc. 494).

A gentleman and lady in Massachusetts found themselves very uncomfortably in the criminal courts for the way in which they attempted to wind up their courtship. Mr. Munson called a public religious meeting at a chapel in Worcester; no magistrate or minister was present, but Munson gave out a text, talked awhile about "repentance," and read Matthew, chapter 20, verses 1 to 5; then a woman came to the front and read from the 6th to the 10th verse of same chapter. (Why these verses, did she mean to confess that this was her eleventh hour, her last chance?) They then joined hands, and Munson said: "In the presence of God and of these witnesses, I now take this woman whom I hold by the right hand, to love and cherish, till the coming of our Lord Jesus Christ, or till death us do part;" the would-be Mrs. Munson then remarked: "And I now take this man to be my lawfully wedded husband, to love,

reverence and obey him until the Lord himself shall descend from heaven with a shout and the voice of the Archangel and with the trump of God, or till death shall us sever." Both then bowed and the man offered prayer. Neither was a Friend or a Quaker, and the ceremony was not conformable to the usage of any religious sect; the right was performed in good faith and followed by the parties living together; yet the Court said it was no marriage. (*Commonwealth vs. Munson*, 127 Mass., 459).

Eddie Walker and Lillian Harman tried to perpetrate matrimony out in Kansas by an autonomistic marriage, with the result that they got into the county jail, the first for 75 days, the second for 45, with instructions to remain there after those days until they had paid all the costs incurred in getting into that gloomy place; the charge against them being that of living together as husband and wife when unmarried. Old Moses Harman, Lillian's father, in his paper, *Lucifer*, gave a full and graphic account of the autonomistic ceremony, or civil compact entered into by the young folk. All supporters and advocates of the rights of women should read it. First, Moses read a long address giving fully his views of marriage. He considers it a strictly private affair, that in it the fate of the woman for weal or woe is involved to a far greater extent than is the fate or interests of the man; that, therefore, in all arrangements pertaining to marriage woman should have the first voice or control, that it should be emphatically and distinctly woman's work, woman's institution. He admitted that this way was not the popular view, but he considered all interference by society, state or church as an impertinence and worse than an impertinence. The promise "to love, honor and obey so long as both shall live," on the part of the woman, he regarded as highly immoral. This and much more. Then Mr. Walker took up his parable, and said that he considered all public marital ceremonies as essentially and ineradicably indelicate, a pandering to the morbid, vicious and meddlesome element in human nature; and remarked that he submitted to this performance simply as a guarantee to Lillian of good faith. He abdicated all marital rights and kindly

said that Lillian might remain mistress of herself and of her possessions, that she might keep her own name and would be his equal in the partnership. Miss Lillian expressed approval of the sentiments uttered by father and lover, refused to make any promises, but retained the right to act as her conscience and judgment dictated, and also the use of her maiden name. The father said he did not "give the bride away," as he wished her always to be the owner of her own person. The result of all this we have mentioned. Not liking the jail there was an appeal, but it was unavailing. The Supreme Court held that the legislature had full power, to prescribe reasonable regulations relating to marriage, and penalties against those who solemnise or contract marriage contrary to statutory command ; and that persons disregarding statutory requirements might be punished without rendering the marriage itself void. (*State vs. Walker*, 13 Pacific Reporter, 279).

Some years ago a clergyman of the Church of England tried to marry himself to his lady love in a private house ; there was no witness of the ceremony in the room, but a woman outside in a yard saw the performance, though she did not hear what was said. Although the marriage was consummated it was held invalid by the House of Lords. (*Beamish vs. Beamish*, 9 H.L. Cases 274).

People have attempted to commit matrimony by telegraph, and the words he said to her and that she said to him have been wafted hither and thither along the wire. Doubtless there is something very romantic in sealing the marriage bond by the electric fluid, and (another says) very likely if the parties who thus contracted would always preserve the same distance between themselves, and restricted their communications to wire or cable, their lives would be more harmonious than the average married life. Doubtless such a marriage would be legal between parties living in communities having the same or similar laws ; but there is a great danger of running against conflicting laws of different States or Provinces ; and as no one could witness more than one half of the wedding, the difficulty of proving the marriage would be great. A telephonic marriage would, for

many reasons, be preferable to a telegraphic. On one occasion, out in the West, an Army Chaplain attempted to unite a couple 275 miles off. The telegraph operator where the bride and groom were arranged matters, and two other operators 225 and 300 miles away were the witnesses. Where was the marriage celebrated in that case? The House of Lords in the case quoted above said that the plighting of the troth was the completion of the marriage; but Blunt in his Church Law (2nd Edition 152) states that the declaration of the parson that the couple are man and wife is the all essential, and in our case these two things were far apart. (22 A.L.J. 369).

It is well for intending visitors to Scotland to remember that Gretna Green marriages are no more in vogue. Since 1856 no irregular marriage contracted in that country by declaration, acknowledgment or ceremony is valid, unless one party has lived there for twenty-one days next preceding the marriage, any law, custom or usage to the contrary notwithstanding. (*Lawford vs. Davies*, 4 P.D. 61).

In the Province of Quebec marriages entered into by minors without the consent of their parents or guardians are void, and the courts can declare them null. In Ontario such contracts are like other contracts made by minors, and can be annulled and set aside if action is taken before the parties have lived together; they are voidable contracts. It would appear that in Quebec a marriage of two Roman Catholics by a Protestant minister is null, and likewise the marriage of a Roman Catholic and unbaptised Protestant, unless a Papal dispensation justifies the union; in fact so is the marriage of two unbaptised Protestants.

Diversity of race and color is no bar to matrimony in Canada, but in the United States it is in almost half the States, chiefly the Southern ones. There is a distressing absence of harmony on this point; in some places a white man may marry an octoroon but not a quadroon; in others he will be a criminal if he unites with an octoroon. In some States marriage with Chinese, Kanakas and Indians is forbidden. (43 A.L.J. 369).

It is a comfort to know that the employment of a sham

clergyman, or the use of a forged license, will not render the service inoperative when the innocent victim of the deceit desires the knot to hold tight. (*Lane vs. Goodwin*, 42 Q.B. 361; *Hayes vs. People*, 25 N.Y. 390).

A marriage on Sunday is all right, not necessarily on the ground that it is a work of necessity or charity; usage has sanctioned it, and it may be considered as a continuing contract, and renewed every day that the couple live together.

Because in all cases intention and consent are all important ingredients for valid marriage it follows, all novels to the contrary notwithstanding, that when one is entrapped into a ceremony without any intention that it is to be binding, he can be freed. (*Clark vs. Field*, 13 Vt. 460). Mock weddings, which silly young people occasionally get up, are not marriages. Yet the experience, down in New Jersey, of Miss Terry shews plainly the advisability of choosing other kinds of amusement. A large party of young men and maidens were having a jolly afternoon and evening; fun and merriment were rampant; at last Miss Terry challenged Mr. McClung to marry her. He bravely took up the gauntlet. A gray haired member of the company was asked to act as parson; he consented and the giddy pair went through the service, surrounded and supported by friends and acquaintances. They knew not that the sham parson was a genuine Justice of the Peace and so authorized by law to marry all who came to him; and he as little knew that the young couple were only in jest. A few days after news came that the Justice was going to make an official return of the wedding to the county clerk. There then was trouble and a running to and fro, and consultations with lawyers and payment of fees. Miss Terry's friends did not know whether she was a wife or not; to settle the matter an action was brought. The judges kept the lady in suspense for two or three years, and then told her that as all the witnesses testified the wedding was only in fun it was no marriage. It cost the young lady several hundred dollars to obtain this information. (*McClung vs. Terry*. 21 N.J.Eq. 225).

R. VASHON ROGERS.

A FIVE YEARS' COURSE IN MEDICINE.

ANYONE, graduates in Arts or Science excepted, desiring to obtain a license to practise Medicine in this Province must now, according to recent regulations of the Medical Council, spend five years in professional studies after he has been registered as a matriculated student. This regulation was made with the object of raising the standard of Medical Education in the Province, and of guaranteeing to the public that those engaged in the practice of medicine were men well qualified for the discharge of the responsible duties which they had been licensed to assume. With the motive which actuated the Council to make this regulation no fault can be found. Rather is their motive to be commended. The higher the standard fixed for medical practitioners, the more fitted will they become for the responsible position they hold in society and the greater confidence and safety will the public feel when of necessity their lives must be entrusted to them. The method of accomplishing this much to be desired result, however, is open to question. Every practitioner who has the true interests of his chosen profession at heart will uphold the Council in its efforts to make the practice of medicine not only in name but in reality one of the learned professions. It is now, and has for long been recognised by the public and by the profession generally that a doctor should be an educated man. Accordingly we find the Council from time to time raising the standard of matriculation not for the purpose, as some would lead us to suppose, of excluding any from the profession but rather with the object of ensuring that those who enter upon their professional studies are qualified by preliminary education to do so to the best advantage to themselves and, therefore, with the greatest benefit to the public. Having followed this course from its inauguration up to a year ago and having gradually raised the matriculation to a standard as yet none too high, though somewhat unintelligible to High School Masters, we find the Council leaving their well beaten path—foregoing the principle which underlies their past enact-

ments—and adopting a new principle entirely. Instead of proceeding still further along the lines of its own previous policy, the Council has now commenced to raise the standard by lengthening the time necessary to be spent in purely professional studies. On one and on only one supposition is this course defensible. If the standard of matriculation is now as high as need be, if he who is able to pass that examination has acquired all the intellectual training necessary for the complete mastery of the course that then lies before him, if the foundation walls have been laid broad enough and deep enough to adequately support the superstructure about to be reared upon them, then the action of the Council from an educational point of view is comprehensible. If, on the other hand, a more liberal preliminary education will better fit the student for the prosecution of his further studies and tend to make him a more intelligent and scientific and, therefore, a better practitioner, the action of the Council is not to be commended. I am one of those who believe that the matriculation might, with more advantage to the student and with better results to the profession, have been raised still higher and the time required to be spent in purely professional studies left as it was. By the advocates of the present regulation it is claimed that so much of the student's time is now spent in the lecture room, that in the four years he spends at college he has not as much time to devote to clinical studies and to the acquiring of a practical knowledge of diseased conditions as will best fit him to enter upon his life's work. With this view most medical men will agree. The more practical the professional course can be made the better for the student and the better for the public. I am heartily in accord with those who hold that the student should study disease not solely from books or from lectures, but at the bedside as well. By all means arrange the course at college so as to leave as much time as possible for practical instruction and bedside study. Cannot this be done without increasing the length of the course? I think so. Increase the work required for matriculation by decreasing the time the student has now to spend in the lecture room. Place upon the list of matriculation subjects some of the

classes now required to be taken after matriculation. I would suggest that Botany which the Council has dropped, but which the Universities require, Theoretical Chemistry as now taken during the first year, and Animal Biology be made matriculation subjects. A glance at works on Animal Biology will convince anyone that a student of medicine who has had a good preliminary training in this subject has already acquired a considerable portion of his Anatomy, Physiology and Histology. The nomenclature of muscles, bones, arteries and nerves of a dog are largely the same as in man; and if we can trust Foster as an authority a medical student in England gets up most of his Physiology from a study of the same animal—not from the human subject at all. By requiring a knowledge of Animal Biology, therefore, at matriculation, the Medical Council would not only compel intending students to learn beforehand some of their Anatomy and Physiology, but would lay a broad and generous foundation for all future professional study. Thus the time now spent upon *Materia Medica*, Physiology and Chemistry could be reduced and more time given to hospital work.

Another objection to the five years' course is the expense. Most young men who enter upon the study of medicine are not over-supplied with money. Many of them must earn the necessary funds either before commencing their professional studies or during the months between their winter sessions. This, I am well aware, is not so serious an objection as the former. The former objection is to my mind one which very materially affects the educational and professional standard of our medical practitioners. The latter is only a matter of dollars and cents and will never prove an insuperable barrier to anyone whose heart is set upon entering our profession. At the same time as few obstacles as possible should be placed in the way of intending students except such as the overcoming of which will make them more competent and reliable practitioners.

I trust that the Council will see fit to reconsider this subject.

JOHN HERALD.

THE MEDICAL COUNCIL AND THE MEDICAL DEFENCE ASSOCIATION.

THE unfortunate differences that have arisen between the Medical Council and a part of the Profession have been settled for the present by leaving the main question, that of the imposition of an annual assessment, in abeyance, until a new election of a somewhat larger number of members has been held. It speaks but little for the disinterestedness and public spirit of Dr. Sangster and his associates, that they were indifferent to all the abuses with which they charge the Medical Council, such as its misuse of the funds entrusted to it, its extortion from unfortunate students, and its efforts to evade the demands of the profession and the public for a higher standard of medical education, until an attempt was made to enforce the payment of a paltry fee, which the rest of the profession paid without a murmur. It is not intended in this article to discuss all the subjects of complaint that have been brought forward, but more especially that portion of them that affects the action and interests of the schools. I must strongly dissent from the idea that these are inimical to the interests of the medical profession at large. It has been charged that the schools, actuated by a selfish desire to increase their funds by attracting students to their halls, have formed a ring to steadily oppose every effort made by the Territorial members to raise the requirements for matriculation and graduation. The contrary can easily be shown to be the case. The effort to obtain a higher grade of matriculation examination originated with the Universities. Both Queen's and Toronto made a Summer Session a part of their curriculum before the Council made it compulsory, and in all the different schools a rivalry has existed as to which should afford the greatest facilities for a higher education, by increasing the number of chairs and sub-dividing subjects of instruction with a view to their being more thoroughly taught. It is also notorious that in the Council itself, a difference of opinion has constantly existed, and a division of votes resulted among the Collegiate representatives that

is incompatible with the united opposition to improvement with which they are charged. That the views of the school representatives have frequently carried much weight is probably to a great extent true. Being in constant contact with the students, they are more familiar with their capabilities and needs than those men can possibly be who, because of long absence from college, and the engrossing occupations of practice, have forgotten the difficulties that they experienced when young men. Hence, apart from the injustice to the schools, it would be most unwise to exclude them from having any share in framing the regulations and conditions under which studies should be pursued.

I have said, apart from the injustice of doing so, for that there would be great injustice can hardly be doubted, if the origin of the Medical Council and the condition that existed previous to its formation be taken into consideration. Few of those who are denying that the schools have any vested rights in the matter, are aware of the powers of the schools (granted in most instances by Royal Charter) before 1866. At that time each of the then existing colleges possessed the right of granting degrees entitling the holders to practice, the only check being the necessity of obtaining a license from the Medical Board, which was granted as a matter of course on payment of a fee of \$4; and proof of identity being given with the person named in the diploma. There existed also Homœopathic and Eclectic Medical Boards, which, there being no schools for either of these branches of the profession in the Province, granted licenses on examination to students who had pursued their studies in the States. There was no Register of qualified men in the country, and the public had no means of knowing whether a man was legally qualified or not. As a natural result there was great laxity, both in teaching and graduating, and there seemed to be no remedy, until the colleges themselves, seeing the evil, consented to surrender the powers they had so long enjoyed, and joined in applying to the Legislature for the formation of a central body, which should alone have the power of granting license to practice and of laying down the conditions upon which that license should

be obtained. Without the co-operation of the colleges that body never could or would have been formed, for the movement that led to its formation did not originate with the profession generally, but with the colleges, and neither they nor the Homœopathic nor Eclectic bodies would have agreed to give up their privileges unless they had been assured of a voice in the regulation of matters that concerned them. This was stipulated at the time and agreed to, and to deprive the colleges of such representation at this late day would be neither more or less than a breach of faith, while it would deprive the Medical Council of those members who by their special knowledge and experience are best fitted to guide and advance it.

I have only one more remark concerning the Medical Council. The complaints about it frequently take the form of asserting that the profession is not sufficiently protected, that the overcrowding is as great as it ever was, and that the number of men yearly gaining entrance into the medical profession is so great that the difficulty of making a livelihood is continually increasing, and that it is the duty of the Medical Council in some way to check this influx, and to protect those who form its constituency from undue competition. This view of the functions of the Council (and it is one I have frequently heard expressed) is, I think, erroneous and selfish, and, judging by the action of the Legislature towards other corporations, at variance with its intention. The object of the Medical Council is the protection of the public, by ensuring to the people that those having its imprimatur are competent to perform the duties they undertake; any advantage in the way of protection that the members of the profession receive, is incidental. If we adopt any other view, and by changes and regulations, seek to provide for our own interests, we shall lay ourselves open to the charge of being a close corporation and to the risk of having the whole thing done away with, and free trade in medicine established. This would probably not be an advantage to the country, and would certainly be disadvantageous to ourselves,

H. J. SAUNDERS.

CLIMATE.

THE word climate as now used has a far wider signification than its derivation and original meaning would lead us to suppose, for by it is understood those conditions of heat, moisture, atmosphere, soil and electricity which impress certain conditions and which modify vegetable and animal life. In considering the healing influence of climate on mankind many factors have to be taken into consideration each playing its own part in rendering a climate healthful or the reverse in a given disease. Latitude naturally has the greatest influence as describing the position of the sun towards the earth in a certain region and thus determining the length and intensity of sunshine. The effect of altitude on temperature may be illustrated by citing Quito the capital of Ecuador on the equator. At an altitude of 9450 feet there is a climate of perpetual spring having a mean temperature of 60°F, for every season. The influence of the relative distribution of land and water exercises a powerful influence and may be studied with much profit by examining diagrams showing the equal annual range of temperature for the globe. Inland climates tend to extremes while those of coast and island are of a more or less temperate character. The effects of ocean currents can very readily be observed by a reference to Great Britain and Ireland, for without their influence the climate would resemble that of Labrador. The fine climate of South California owes its equability and its protection from the great extremes of its inland neighbor, Arizona, to the influence of the northern equatorial drift in the Pacific. The proximity of mountain ranges tends to increase rainfall, except under certain conditions of protection as in Colorado, where under the lee of the Rocky Mountains their sanitarium possess exceedingly dry climates. The influence of soil is sometimes surprising. Light, loose soil, as sand or gravel, reduce the heat conducting powers of the soil, whereas heavy soils, such as clay, are better conductors; therefore light, loose soils are subject to high temperatures, the contrary with dense, heavy soils. The influence of vegetation must be apparent to every one. The effect of forests on temperature has often been discussed,

and the general conclusion arrived at is that by retaining and absorbing moisture, they moderate heat, while their influence on the amount of rainfall has been absolutely proved by its increase in districts following extensive tree-planting, and the reverse where large areas have been denuded of their forests. The last climatic factor is wind. Where wind is the rain-bringer, as it usually is, localities to the lee of mountain ranges have small rainfalls, hence the extreme dryness of the plains east of the Rocky Mountains. The prevailing wind is often the key to the climate of a locality. It serves a distinctly hygienic object in dispersing noxious exhalations, in permitting free evaporation and maintaining the circulation of the air so necessary for the purification of the atmosphere. The elements of climate are temperature, hygrometry, atmospheric pressure, wind force, and atmospheric electricity. Temperature has an important relation to man's well being. Natives of temperate climates can endure great extremes of heat under favourable circumstances, while on the contrary the effect of excessive sun heat is at times exceedingly disastrous. The effect of great heat is to reduce the number of respirations, and if continued for any length of time the digestive powers are weakened, the appetite fails, the liver becomes congested and undergoes changes which may end in induration or abscess, the nervous energy is lessened, in a word, the functions of digestion, assimilation, respiration, blood making and the formation of new tissue are all impaired. As to the practical application of these observations space will permit but few remarks

Madaira is the best type of what we may describe as a warm moist climate, the annual mean temperature being 70° F, and the difference between winter and summer not exceeding 9° F. There are no cold winds, nocturnal radiation is slight, the relative humidity percentage is large and rainy days numerous, the principle being to keep patients in an even atmosphere—in a sort of aerial warm bath. In catarrhal phthisis this climate is a distinct success, but so much cannot be said for other forms of consumption, chronic bronchitis, pulmonary congestion unconnected with heart disease are wonderfully relieved, bronchial asthma

often doing well also. The Canary Islands have a somewhat similar climate but warmer and drier. Egypt is probably one of the best types of a warm, dry climate. It has a most beneficial influence on phthisis, provided the amount of lung area attacked is not excessive and there be no fever. It is also suitable to bronchial asthma, chronic bronchitis, chronic pneumonia and chronic rheumatism, in each case one of the best results being the promotion of sleep. The Riviera with its warm climate is a favourite pleasure as well as health resort. It seems from statistics to be most suitable to phthisical cases in which inflammatory attacks have been the predisposing causes, also in scrofulous and the first stage of unilateral phthisis, in chronic bronchial affections and in anæmia. It is contra-indicated in insomnia. Southern California is to be classed among the warm, dry climates; the district most frequently chosen as a health resort being the western part fringing the coast. The strongest point about the climate is its equability, thus being superior to Egypt and the Riviera, for a patient can live with comfort all the year round, the difference between the seasons not being accentuated. It is moister than Utah or Colorado but by no means damp. The best example of a moist climate is the sea, as it combines moisture with a saline atmosphere. Speaking generally it may be said that sea-voyages are advantageous if the weather be fine and the patient able to remain on deck, but in the present age of hurry and scurry there are not the same advantages to be derived as in the old days when two or three months were spent in one voyage. Sea voyages may be recommended in chronic pleurisy or empyema, chronic bronchitis, various forms of scrofulous disease, hæmorrhagic phthisis and in various conditions the result of overwork, especially insomnia. From experiments in diving bells and pneumatic tubes an opportunity has been afforded of studying the effects of increased barometric pressure. Long exposure to a highly compressed atmosphere produces a peculiar set of symptoms to which has been given the name *caisson disease*. These symptoms rarely come on in the caisson, but if they do it is a fact worthy of notice that the remedy is to increase the pressure when the symptoms will gradually disappear. Two

sets of apparatus have been devised for the therapeutic use of compressed air, in one of which the air is inspired through a mask tightly fitting to the mouth, while in the other the patient is placed in a compressed air bath. As a result of the treatment a large amount of oxygen is absorbed by the lungs, thereby promoting further oxidation and increased tissue change. In asthma the attacks are rendered less severe, and after prolonged treatment the intervals become much longer. In chronic bronchitis the effects are very satisfactory, but in phthisis much cannot be said in its favour. The influence of diminished atmospheric pressure has been carefully studied in the Rocky Mountains, where large mining communities are to be found at altitudes up to 10000 or 11000 feet. Here the circulation becomes quickened and the heart impulse more powerful. The number of respirations are at first increased, but afterwards the breathing becomes deeper and the inspirations longer, while the thorax increases in circumference and in the mobility of its walls. The treatment of phthisis by prolonged residence in elevated regions, has been proved to be successful beyond a doubt. The Rocky Mountain climate, and particularly that portion of it included in the State of Colorado, is the one possessing the most interest for us. There three distinct series of elevations may be found, the prairie from 4000 to 5000 feet, the foot-hills from 6000 to 7000 feet, and the great natural parks at an elevation of 7000 to 8000 feet. The climate may be described as very dry, clear and sunny, very windy, and abounding in electricity. The sun shines on an average 330 days in the year. The winters are bright and clear, with scarcely any snow. Here invalids may pass the summer camping in parks and leading an open air life, while the winters may be spent in the foot-hill towns. A large percentage of phthisical patients, provided the ravages of disease be not too extensive, have the disease arrested and many return to their native country; others can maintain their health only by a permanent residence. The climate is contra-indicated in phthisis with double cavities, in fibroid phthisis, and in all cases where the pulmonary area at sea level scarcely suffices for respiratory purposes—in catarrhal and laryngeal phthisis—phthisis with fever, chronic bronchitis, diseases of the heart, blood vessels, brain, liver, kidneys, and in patients of advanced age.

R. W. GARRETT, M.D.

NOTE.—This article is largely indebted to the Lumleian lectures delivered very recently before the Royal College of Physicians, England, by Theodore Williams, F.A.C.P.

CURRENT EVENTS.

THIS section of THE QUARTERLY is set apart for notices of the principal subjects on which the public mind, especially in our own Empire and in the United States is exercised. In succeeding numbers, other countries or progress in the world of science may be referred to.

In the United Kingdom, the Irish question and the labor question, with dis-establishment in Wales and in Scotland as side issues, have been the engrossing topics both in and out of Parliament. Never has any proposed measure been so riddled with criticism as Mr. Gladstone's Home Rule Bill. Epigrams and hisses are tried as well as speeches and essays. Poets, philosophers, men of science, financiers, historians, bishops, brokers, well dressed mobs and serious politicians have all taken a hand in and pretty much on the same side; but like John Brown's soul the Bill goes marching on. There are a million names to the petitions against it and not a hundred in its favor; demonstrations are made on an altogether unprecedented scale; 1,200 delegates, chosen from every part of Ireland, cross the channel to tell England that it means ruin to Ireland and danger to the Empire; every Protestant Church in Ireland cries out in alarm and leading Roman Catholics join in the cry; the testimonies of Count Cavour and of Kossuth, one the greatest man of affairs and the other the greatest Nationalist that Europe has seen in the last half century, are quoted on the same side with those of John Bright, who led the sober thought of English radicalism all his life, and of the great Whig and Conservative leaders, united now as they never were before in English history; but the "ever victorious rhetorician" continues to gain new victories and to press nearer to the goal. "He might as well try to square the circle" says Kossuth. "He might as well expect to reach the moon, because he has got to the top of St. Paul's," says the Duke of Devonshire. But, on the other hand, men can hardly get it out of their heads that purely Irish affairs might be managed by an Irish legislature. Confessedly, it would be anomalous to have one part of the United Kingdom governed federally and the other parts governed in a different way, but the choice is between the anomaly and a quarrel which has lasted for generations and which is now more acute than ever, seeing that there is a greater Ireland beyond the seas seconding the aspirations of the people in the old home. Besides, the Imperial Parliament has given the second reading to a bill that embodies the Irish demand. That means much. Things henceforth can hardly again be as they were. For good or evil,

it would seem that the Fates have determined that the experiment shall be tried. When? That is another question. This Parliament cannot last long. In the next, the majority may, probably will, be on the other side. But neither will that end the question. An Irish legislature and Executive must be tried, though the experiment is likely to lead to the federalising of the United Kingdom and the Empire.

Strikes threaten society in an old, densely populated country like Britain or Belgium more seriously than in new countries. There is a great difference between an explosion on a prairie and in a bee hive. In Britain, there are symptoms that the age-long strife between labor and capital is becoming intense. It is not only that cotton, coal and shipping strikes take place on a larger scale, but that a spirit has been shown, notably in Hull resembling that which brought about the horrors of Homestead. Employers and employed stand on what they believe to be their rights, apparently forgetting that they owe duties to each other and to society, and that duties are more important than rights. Yet influential organs of public opinion, like the *London Times* and the *London Spectator*, write as if free contract is of itself still all sufficient to solve the problem. When things have come to such a pass that employers in Hull apply to the Government for soldiers, and threaten to move away from the city, though they thereby ruin it, and the laborers cut the hose of the fire engines sent to preserve their houses from being burnt, it is surely too late to preach the frigid beauties of free contract and expect men to abide by its stale moralities. Such preachments scarcely mark time on the question at issue and they do not pretend to offer a solution. The men get a stone, instead of bread, when told that while they have a clear right to abstain from labor, the employers have as clear a right to fill their places with laborers more in want of wages. That concedes all that the capitalist demands but it denies the deeply felt though sometimes inarticulate claim of the workmen. They believe that when they have aided, it may be for half a life-time, to build up a great industry by their skill, honesty and heart, their share in it is not fully represented by the wages received and which were determined by the market price. Wages, even good wages, cannot measure the rights in equity of the human workers. The rights of the horses and mules can be measured by their fodder, stabling and grooming; but the human element in labor is different in kind from every other element, and to ignore its potentiality is not only to treat it with injustice but to diminish the quantity and quality of the product. Of course, rights in equity are more indefinite than statute rights, but they are none the less real; and, if they are not recognised, the appeal will be made to the ballot, or, as was the case lately in Belgium, to violence. Such appeals whether successful or unsuccessful are full of danger. Violence is an unsatisfactory basis on which to

build reforms intended to be permanent; and politicians are more likely to shipwreck, than to establish, the industries with which they intermeddle.

There does not seem to be much enthusiasm for disestablishment in Great Britain. The Suspensory bill, which it is proposed to apply to that bit of the Church of England which struggles to exist in Wales, has waked up the Archbishop of Canterbury, and he has called the faithful to arms, in tones that show that he means fight. The social power of the Church is immense, and Mr. Gladstone may find that friends who have stood by him on ticklish political and economic questions will not follow him in an effort to uproot an integral part of a great historic institution, with which their devoutest feelings and loftiest conceptions of national life and duty are entwined. Dissent has not yet succeeded in supplying a worthier form for the religious spirit than that which the ancient Church of the nation offers, and until it does so, English conservative instincts are likely to find expression for some time yet, in the old stubborn declaration "*Nolumus leges Angliæ mutare.*"

The same remarks hold true with regard to Scotland. The Free Church is celebrating its jubilee, and all that is best in the land is willing to unite with it in honouring Chalmers and the heroes of the ten years conflict. But when Dr. W. C. Smith, the Moderator, in an address of such literary merit and religious tone that no praise is too great for it, invites the Established Church to renounce its alliance with the State, in order that Presbyterian reunion may be effected, the question is sure to be asked, "Why have the non-established Churches not united? Why, too, has the Presbyterianism of America been unable to hold together?" The cause is certainly not in the State. On the contrary, it may be claimed that, but for the State, both in England and Scotland, Protestantism would long ago have split into fragments. Even as it is, the Established Church in "disrupted" Scotland, a country with four millions of population, has nearly as many communicants as the largest Presbyterian Church in a country of sixty-five millions. In the States, old world controversies are still considered sufficient grounds for Presbyterian division. Doctrinal differences, that no one cares to understand, divided the largest Church into Old and New schools. A political quarrel again divided the Church geographically. Now, denominational newspapers have stirred General Assemblies into a panic, and they are risking another division, on the ground that some of their professors have come to the same conclusions, on points of Biblical criticism, as almost every scholar in every Protestant country has slowly arrived at, by methods of investigation that Protestantism claims as its own. Disestablishment is inevitable, as a step in

the evolution of the State, but when the surrounding outlook is so cheerless, it is not wonderful that men of peace are in no hurry for it in Britain, and that many fancy that the old house their fathers loved so well is good enough, at least, for their day. Men who show little genius for construction have not the same right to destroy, that the fathers of the Reformation had. Knox, for instance, was a notable puller-down, but what a national edifice he built !

France continues restless, at home and abroad, but she continues to gain in political steadiness, notwithstanding kaleidoscopic ministerial changes and fever fits of colonial expansion. She is first neither by land nor by sea, and is therefore dissatisfied ; ready to quarrel with Germany, but sobered by the thought of the unspeakable consequences of failure ; ready to quarrel with Britain about Egypt, Morocco, Uganda, Madagascar, Newfoundland, Siam, or any other corner of the earth where their interests appear to clash, but unwilling to force the great sea power into closer relations with the Dreibund. Pity it is that she cannot forego the paltry ambition of being first in power for the nobler aim of being first in service. She is so indispensable to Europe that we regret she should not recognize that her only hope of getting Alsace and Lorraine back is through moral force. When Europe is convinced, that a good and not a bad use of those provinces will be made by her, Germany will be unable to hold them. It also seems very like folly for France to throw away conscripts and millions in a useless competition. She gains nothing thereby and loses much. England redeems outside lands from barbarism, not for herself but for all nations. She throws the doors of their commerce wide open to all ; she passes no exclusion, or deporting, or " protecting " laws ; for she has learned the lesson, that each member profits most by the health of the whole body. Meanwhile, it is fortunate, that diplomatic correspondence is conducted by the Foreign Office with due regard to secrecy. Were it otherwise, there would have been war before this. So the best informed persons tell us privately. With Dufferin in Paris and Rosebery at the Foreign Office, there will be no war, unless France takes the bit between her teeth, and then the limitations, even of Lords and of common sense, will become apparent. France, however, is, at bottom, more sensible than Lord Tennyson ever gave her credit for being.

Russia is still the bugbear of our Indian Empire. She has moved, irresistibly as a glacier, across the intervening steppes and deserts till she is now established on the Oxus, ready for another spring.

Afghanistan is the only buffer that remains between her and the scientific frontier that guards the two hundred and sixty

millions, who need a master to keep the peace between their different races, languages and faiths, and who appreciate English justice without entertaining any special love for Englishmen. When the great spring is made, as it is sure to be, sooner or later, should British troops advance to meet it some hundreds of miles from their own base, or should they allow the Amir to fight his own battle? That is the main question, on which it would be well that the public mind should be decided. Military men are almost unanimous in favor of the former course. Civilians, who remember what a mess of it we made before, at Kabul, and how intensely the Afghans hate a master, are doubtful. In the meantime, it is noteworthy how frankly the authorities "speak out in meeting," and tell us that the trouble is imminent. Lord Roberts, for instance, the other day in bidding farewell to India, at a great public demonstration given in his honor at Calcutta, declared in the presence of the Viceroy and the hearing of the world, that India must say to Russia "hitherto shalt thou come but no farther." Such an utterance from "Bobs Bahadur," as Tommy Atkins fondly calls the great soldier and statesman, means much. Thanks to Bismarck the old style of diplomacy has passed away. The new is better than the old, so far as frankness is concerned. The watchword in India now, is "ready, aye ready." Russia is stopped from advancing on Constantinople by the attitude that Austria—and her attitude means that of the Dreibund—has recently taken towards Bulgaria, as well as by the cordial relations between Bulgaria and Roumania, and the comparative friendliness of Turkey towards both. Consequently, she must throw her pressure eastwards, instead of to the south, and wherever she presses, a hundred millions are pressing behind. What, meanwhile, are the thoughts of the teeming millions in India? They seem to be growing in loyalty to Britain but they must have deeper thoughts. No one can say what these are, until some prophet of their own arises to reveal them to mankind. Australia, too, will count in the war, when it comes. She could no more afford to allow Russia possess India than the the States could allow China to conquer Canada, or England allow France to possess Ireland. And Australia could send not only good mounted infantry, but splendid stuff to officer the irregular cavalry of India. The statesmen of Australia and the mother country have talked over this matter.

In the meantime, Australia is having a bad financial quarter of an hour. Almost every section of it is being taught by sore experience that undeveloped resources are not equivalent to hard cash. The lesson is one that young countries are slow to learn, especially when they find it easy to borrow and when deposits are forced on the banks. Everything went so swimmingly for a time in the brand New World under the Southern Cross that

prudence was considered an old world virtue that might be thrown to the winds. Some of the people spoke in the same way of Christianity. Why should not Australia have a religion of its own? They sometimes talked as if the ordinary laws of economics did not apply to them and that to-morrow would be as to-day, only more abundant. They certainly mocked at the hesitation or fits of caution that seized Mr. Bull, two or three years ago, when new loans were applied for. Everyone who sounded a note of warning was accused of ignorance, stupidity or malice. "When we Australians want an article, we order the best and do not ask the price," has been a favorite expression to denote their way of doing things. But even Broken Hill silver and Mount Morgan gold mines, with the annual Golden Fleece of New South Wales and the Frozen Mutton of New Zealand thrown in, have their limits; and when depositors found that their money was locked up in enterprises that were not turning out profitably, they became alarmed. Then ensued a run, and when one bank went down, the run became a rush. Bank after bank has collapsed with the results of stoppage of work, loss of income or capital, and wide spread misery. Australia however will right itself rapidly. Its potential wealth is beyond the power of the pen to describe; its people are of the best stock; and British investors have faith in the country and in the people. London remitted promptly so much gold that inconvenience was felt in the home market. The suffering however will be great and Canada should be warned in time. Our banking system is first-rate, but our debt is out of proportion to that of the United States or to our realized wealth. Rigid economy and a lessening of the public burdens are indispensable, if we would remain solvent and independent.

In the United States, the principal "Current Event," so far as concerns the outside world and Chicago—for it is well to classify on an ascending scale—is the Columbian Exposition, which opened its gates on the first of May and proposes to close them on the twenty-sixth of October. Though advertised in Europe for three years, as nothing was ever yet advertised, the largest number of Europeans likely to visit it will be those who live in America; but, during the Summer and Autumn months, crowds will flock to the great show, from every State and Province, such as were never seen before on this Continent, save perhaps in pre-historic times. The majority will be none the worse save in pocket, while a considerable number will be the better. We are all less or more parochial, and it does us good not only to be reminded of the fact, but to see with our own eyes, that little Peddlington is not the world. Even the United States will in time learn this simple lesson.

These International Exhibitions are a sign of the times.

When Prince Albert inaugurated them by the one that was held in London in 1851, some criticized the proposal as mercilessly as they now criticize the proposed Parliament of Religions, while others joyfully proclaimed that wars were to cease and that the Millenium was about to come. As usual, the truth has been found to be between the two extremes. The critics lie submerged under the actual fact of many Expositions. The great nations accepted the idea. They still compete with each other for the honour of celebrating in this fashion any note worthy event. They give expression to the idea on an ever increasing scale of size and magnificence. Melbourne, when only half a century old, celebrated the Centennial of Australia and boasted that its grounds were more extensive than those of any previous Exhibition. But, the last is sure to be first. It is held in Chicago, and Chicago will break the record or burst.

All honour to the memory of Albert the Good for the idea and for the labour he took, in his customary modest way, to have it carried out successfully. Any one can see now that the facts of modern material progress and the principles at the base of modern civilization make it easy and fitting to hold such Exhibitions. The brotherhood of man is manifested and promoted by them, and they are instruments of popular education on a large scale. The average American citizen whose reading is confined to newspapers, with columns devoted to parish politics and an obscure corner reserved for the rest of the world, is healthily shocked, when he sees that "rotten, old monarchies" can teach him a few things, not only in art, but in "notions" and other departments where it had been an article of faith that Statia was supreme. In transportation he should be an easy first, but the Canadian Pacific Railway Company exhibits the best Trans-Continental train. In cheese, Canada is first and the rest nowhere. Dairying has attained with us the rank of a fine art, a department of science and a great industry.

Yes, any one can see all that now, just as anyone could discover America, were it lost, or make an egg stand on either end. None the less, the story of Columbus and the egg will have to be told as long as men live on our planet. Forty or fifty years ago, the advantages of International Exhibitions were not quite as visible as they are now. More than that, with all the experience since gained, the first was the only one that proved a financial success. Queen's and three other Canadian Universities are sharing in the surplus. By the way, we had forgotten about Edinburgh. It too had a balance to credit, but perhaps it should not be counted. National characteristics put financial failure in its case as completely out of the question, as they would were the Jews to buy back Jerusalem and hold an Exposition there. "They are all Jews here," mournfully remarked

a son of Israel in Aberdeen to his partner, who visited him to find why the business was not paying. Chicago is hardly up to the Aberdeen mark; and so, while it is making a brilliant display, probably the deficit at the end will be the most brilliant thing about it, rivalling the great McMonnies fountain, lit up by electricity on the darkest night. The management is prepared for this. "Regardless of Expense" has been the motto, regardless of consequences.

But, the millenium has not come, and the part of the show that attracts most visitors is the modern engin'ry of war, with its grim and silent splendour. Since 1851, wars have again and again shaken Europe from the East to the West. India has been convulsed. China and Tonquin, South Africa and South America have had their baptisms of blood. Millions of armed men have swayed to and fro in the frightful conflicts of civil war on our continent. Always, when the last struggle is over, men begin to predict that peace has come to stay. Would that it were so, for war includes "the sum of all villanies!" But the prophets prophesy falsely. The Old World staggers under the weight of its armies, its Krupp guns, its miles of earthworks, and the taxation that these demand, without any prospect of letting-up. "Only the sword keeps the sword in the scabbard," said Von Moltke to the German Parliament, and though the Parliament believed the old man who was able to hold his tongue in a dozen languages, now that he is gone they are beginning to doubt. The expense is so enormous that the Reichstag at any rate shrinks from going on with the game of Beggar myself and Beggar my neighbour, and is half inclined to believe that France will be content to live without Alsace and Lorraine, or that war itself, not short but decisive, would be a less dreadful alternative.

None the less, the world moves, though slowly. Each of the wars just referred to marked an onward and upward step on the part of some section of the race. "Through the shadow of the world we sweep into the wider day." International Exhibitions, Arbitration tribunals, Peace Congresses, Women's Conventions, Parliaments of Religions, Christian Endeavour mass meetings, each and all have a certain ludicrous side to them, but there is something real at their heart. They are preparing the way for "The Parliament of men, the Federation of the World," that Tennyson foresaw fifty years ago and that may be realized—hope whispers—before the students of to-day are old men. Let us have faith. It is impossible to refute a sneer, but it need not be refuted verbally. The scorner accomplishes nothing.

One thing should in justice be said concerning the Chicago

Exposition. Any one who is afraid of going, because of rumored expense, or of thieves, pickpockets, and swindling hotel-keepers, should be afraid of walking on his own sidewalks, because the tiles are likely to tumble down and crack his foolish scull. Neither man nor woman need hesitate. The unprotected female is as safe on the road, in the city or within the grounds, as if she had an army to protect her. The payment of fifty cents admits within the gates and to everything worth seeing. Before the Peebles man had been an hour in London, "bang went saxeence," and if you melt a bill at the Fair, it will slip through your hands like water, but that is your own look-out. The Eastern papers resent the airs of their Chicago contemporaries, according to whom, the Sun rises to gaze on the Exposition and the marvellous city in which it is housed. But that is the ordinary Chicago tone of just appreciation of the city's greatness. Admittedly, the Chicago business man has scarcely a peer in public spirit, organizing ability, largeness of conception and freedom from cant. Yet, others would say this more readily, if Chicagoans were not so conscious of it all and so ready to say it for themselves. Still, *fiat Justitia*.

The United States have a man and they have recognized him. But as a bull in a china shop, so is the President to the machine politicians. They cannot do anything with him, but they cannot do without him. He is stronger than his party, because he dared to be in advance of the people. On the tariff and the silver questions the people caught up to him and they now feel that along other lines he may possibly see further than they or the party managers. Besides, the Constitution gives the President great power, and a President who knows that an unwritten law from the days of Washington denies him a third term has not even temptation to bow the knee to Tammany or to conciliate the office-hunters who are the vampires or the barnacles of Democracy. Mr. Cleveland will leave a deeper mark on American public life than any of his predecessors in this century, Lincoln alone excepted.

There are twelve millions of voters in Statia, of whom eleven and a half millions mind their own business and add to the wealth of the country, while the remaining half million hunt for places at the public crib. This fraction of the population imagines that the whole time of the President should be devoted to them, and so far the rest of the people have groaned but made no articulate protest. If the machine men had their way, the President should neither eat nor sleep in peace till he had satisfied their hunger. But, if he examined into the claims of a hundred per day, it would take him fifteen years or so to go over the list, and therefore Mr. Cleveland has wisely decided not to try, but to make as few changes as possible and these for cause. His

last announcement was a hint as emphatic as that given by Squire Squaretoes, when he kicked a poor wretch downstairs, or as Carter Harrison's last. Driven to desperation one day last month, he lit a match and set the applicant's beard on fire. This method strikes us as Chicagoesque. There is nothing to match it, except Samson's way of getting even with the Philistines. Perhaps the Biblical analogy may commend it to those who do not approve of the present Mayor of Chicago or his ways. Mr. Cleveland himself may try it, if all other means fail.

What will he do about the tariff, is the absorbing question? The Republican party managers believed that they had "fixed" the Senate, and things generally, so that the tariff could be reduced only by putting taxes on tea, sugar, coffee and tobacco, which the masses would resent. They spent the surplus, accumulated under Mr. Cleveland's former administration, and there is nothing to show for it except some war-ships, which Uncle Sam needs as much as a coach needs a fifth wheel. They made an annual charge for pensions, which is the wonder of the world. By the way, when the pecuniary advantages of annexation are counted, it would be as well to remember that our share of this same pension charge for the next fifteen or twenty years would be more than the interest we are paying on our National debt. The manufacturers feel then, not without complacency, that they have Mr. Cleveland and the people too in chancery, and that the McKinley bill is pretty safe. They are calculating without their host. This President means what he says, as they might have found out by this time. Mr. David A. Wells has not been summoned for nothing. Besides, they forget that the very object of a revenue tariff is to produce revenue, while the object of Protection is to enrich the home manufacturer. Congress will give the country a revenue tariff.

It is well that the Geary Act has been declared constitutional. It is the logical development of the Exclusion law, which was declared constitutional, though it infringed the Treaty of Peking, and, as China did not openly resent the one act of violence, she will probably calmly submit to the other. We speak compassionately of China as "heathen," but in the observance of Treaties, she is the Christian and Statia the heathen country. The argument of the minority of the Supreme Court, against the constitutionality of the Geary law, would be unanswerable, if it were really the case, as pundits assume, that the power of Congress rests only on a written instrument. Congress, however, as a matter of fact, is evolving into a Parliament, and a Parliament is competent to do anything except to change a woman into a man. The people of the United States are now brought face to face with the Chinese problem.

They can no longer shift the responsibility from their own shoulders to those of the Supreme Court, the Cabinet, the Congress, or the sand-lot politicians of the Pacific slope. What will they do with it? They brought pressure enough on Congress to make it over-ride the will of Chicago on a detail of Sabbath observance. Will they do as much for the weightier matters of the law? The question of whether it is likely to cost one or ten millions to carry out the Act, or whether China will suffer more or less by retaliation, should not weigh. If the last Civil War has not taught, that penalties—slow, but sure and terrible—follow on national unrighteousness, another lesson will have to be given by the Judge of all the earth. We have no right to expostulate, for our own hands are not clean. We do not exclude nor do we deport, but we fine a Chinaman, no matter how good a Christian he may be, \$50 for entering Canada; and we pay immigration agents to coax Jew, Turk and infidel to come and settle in Canada! At present we play only on a Jews-harp and not a big sinful fiddle. Our neighbors are more consistent.

To grass-hoppers a mole-hill is a mountain and a planet a point in space. On the same principle, Christians have been giving weeks to the Briggs case and minutes to the Geary Law. The President's minister tells his people, without the slightest regard either to the laws of courtesy or the laws of perspective, that the reason why the Church is not doing its duty to the world is—in one word—Dr. Briggs. Cast him out and all will go well. Is it any wonder that good men are willing to sacrifice him? The argument of Caiaphas is always a telling one. And so it may be said, without any disrespect to the judges, that the condemnation was a foregone conclusion. Dr. Briggs was pronounced guilty, before he was heard, and by judges who were puzzled when a reference was made to the Jehovistic and Elohist documents! The case was decided, not by the evidence adduced, but by *a priori* arguments that any Civil Court would have set aside as irrelevant. One of the great merits of the Roman Catholic Church is that it does not force schisms. It tried that method of securing unity and peace in the sixteenth century, but it only demonstrated the unwisdom of violence and haste. The Anglican Church, too, has learned the same lesson, since it ejected the nonconformists and froze out the Wesleys. Scottish Presbyterianism and every Church that has a future must also learn it or pay the penalty. At Washington, the New York Synod went largely with Dr. Briggs, and the Synod of Illinois gave its learning and youthful enthusiasm to the same side. Why? Because in those centres the questions at issue have been discussed. Evidently, then, it is simply a matter of education with the others. Ten years hence, for events move rapidly in the United States, the others will be explaining

that they did not intend to condemn Dr. Briggs. The unanimous vote of the Missionary Synod in his favor was also significant.

The Behring Sea case is valuable as an object lesson. It impresses on the dullest mind that Canada has Imperial rights and responsibilities—none the less real because undefined—and that in defending these, she would be no-where, if separated from the Mother country. Now that the dispute has been submitted to arbitration, we have gained all that we ever really desired. No matter what the decision, it is to be given by a high international court, on which we are represented. Our interests, too, could not well be in better hands than in those of Sir John Thompson and the Hon. Charles Tupper. The arguments seem to be all on one side, as against the claim to overhaul and capture the ships of other nations on the high sea; but there should be international agreement for the preservation of the seal, and it may be added, other creatures too that are in danger of extermination because of short-sighted greed. There is no more cheering sign of the times than the steady development of international law, but, it is just as well to note, that had there been no British navy, there would be no tribunal sitting now in Paris to decide whether or no we have rights in Behring Sea.

The Parliamentary session in Ottawa, was shortened, with the consent of the Opposition, as the Premier—having accepted the position of arbitrator—had to be in Paris at the opening of the case. With a leader of the Opposition like Mr. Laurier, there will never be difficulty in arranging for anything that the welfare or honor of the country requires. It is an unwritten law, in the Mother of Parliaments, that the bitterest party strife must cease in the presence of foreign complications, and the Canadian Parliament does well to act on the good old law or tradition.

In the Premier's absence, his colleagues show untiring industry. We hear of them in the Maritime Provinces, in Quebec, in Ontario and in the Rocky Mountains. They are doing their best to study the needs and feel the pulse of the country, and deserve all praise for their energy, though it may be admitted that part of the credit should be given to Mr. McCarthy, and perhaps still more, to the quiet but very decided stand taken in the House by the member for Frontenac. It is the misfortune of strong Governments, that, like Kings, they seldom hear the truth in tones sufficiently loud to impress them. Mr. Calvin was actually the best friend they had last session. Had half a dozen other supporters, representatives from rural constituencies, voted with him, it would have helped the Government mightily to prepare such a thorough scheme of tariff reform as the country demands.

It is difficult to forecast how much of a following Mr. McCarthy has, because it depends, not so much on the decision in Cardwell, as on what may be the trade policy of the Government, when it takes its stand next session. The Manitoba question may be considered practically settled, but to abolish some duties, reduce others, raise a sufficient revenue, and at the same time preserve the N. P., will tax all the statesmanship of the Cabinet. It is, however, certain, that the only way of making the McCarthy movement of none effect, is by a bold revision of the tariff. Mr. Foster, speaks well on this point, but so did Sir John Thompson in Toronto, before the last session, and the mountain brought forth only a mouse, or, to speak with perfect accuracy, two mice. The people will not be satisfied with words. Sir John Thompson has disappointed them twice since he became Premier; first, in the making of his Cabinet, and secondly, by not cutting away the mouldering branches last session. They will hardly stand a third disappointment, especially as they are not forced now to choose between the old policy and the "greater freedom of trade, especially with the United States." Mr. McCarthy stands to them for full blooded Canadianism, combined with their legitimate share in the trusteeship of the greatest heritage in the world.

The legislature of the Province, though somewhat given to Pickwickianisms like the Plebiscite, is as good a body for the discharge of business as can be found on this continent. It is also blessed in being led by a man like Sir Oliver Mowat. Always trusted by the people, the law of contrast has of late heightened his value in their eyes. A scarcely less important element in the House is the leader of the Opposition. Mr. Meredith is one of that rare class of public men who think more of their own honour and of the country than of mere party claims. With the exception of the Department of Education, which will never be successfully administered until there is a council of experts to aid the Minister, the work of the Province is well done. The Rev. Dr. Douglas, however, is dissatisfied, because the Methodist Church is not represented in the Cabinet. His plea has no point unless it means that Methodists as Methodists should be in the Cabinet. Such a position is so extraordinary that one is glad to remember that reporters may make mistakes or that Homer sometimes nods. Perhaps, however, the good Doctor meant only to satirize, by the *reductio ad absurdum* argument, the assumption that the French-Canadians and the Irish Roman Catholics must be represented in the Dominion Cabinet. If so, he must be amused at the public's lack of appreciation of humour. He knows that it would not benefit the Methodist Church two straws if the Cabinet of Ontario were composed of nominal Methodists or—for that matter—of Class-leaders; whereas it would benefit every Methodist in the Pro-

vince to have it composed of Presbyterians like Mowat, Episcopalians like Meredith, or Roman Catholics like Fraser.

In the establishment of a line of steamers between Australia and Canada, another link has been forged in the chain binding the Empire together. To make the line commercially successful, there should also be a submarine cable, with cheap rates, and free or fair trade between the two great colonies. There should be free trade within the Empire, and that would include eventually, with the help of Mr. Andrew Carnegie, the United States. We, too, hope for a reunion of the English speaking race, but we seek it along historical and not theoretical lines. It must not begin with further disunion ; and a preliminary sacrifice of the Queen, the Prince of Wales, the House of Lords, the Established Churches, India and other trifling possessions ought not to be absolutely necessary. The sacrifice of Iphigenia was nothing to this modest demand. Japan never asked for such a *hari-kari*. Still, Mr. Carnegie is now on the right track and we expect to welcome him before long as a member of the Imperial Federation League. G.



THE COLLEGE.

REPORT OF THE PRINCIPAL TO THE BOARD OF TRUSTEES

FOR YEAR ENDING APRIL 26, 1893.

IN reviewing the work of the year, while there is cause for encouragement in the spirit of the students and the staff, and in the devotion of many alumni and friends, it would be idle to conceal the apprehensions that at times arise, when the work that a modern University must do, is compared with our scanty resources, the absence of Denominational or Provincial support and our remoteness from either of the great financial centres of Canada. Ignorance of the requirements of a University and of its importance to the general well-being is well nigh universal. Even when recognized, few think of ways and means, or their own responsibility. The Institution, round which so many memories and affections cluster, and which is doing so great a work is hampered on every side by poverty which would be hidden from the public, were it not a public duty to tell at least once a year, what our necessities are. It is not strange that Victoria, after a struggle of half a century, hauled down its flag as an independent University and migrated to Toronto as an affiliated College of the provincial University. Far better that, than continue where it had been, without proper equipment. The town of Cobourg offered inducements to it to remain, which if offered in time, would have ensured a different decision from the General Conference in Toronto. Individuals strongly opposed to the change, were also "too late" with their offers of assistance. Once the Church had spoken by its General Conference, no reversal of the verdict was possible. For good or evil, the experiment had to be tried. We wish it every success, were it only for this reason that nothing that a University can gain by the evil fortune of a sister is to be compared for a moment to what it gains by the general good. Queen's came to a different decision from Victoria, because its position, history, constitution and circumstances were different. The decision was not come to lightly. The inducements to accept the Federation Scheme, were, from the denominational and the mere economising point of view, almost irresistible. The Church would have secured by the union of Queen's and Knox, the strongest Theological College in Canada, and the supplying of University demands would have been thrown directly on the Province. Advocates of the scheme must not think that we were blind to the induce-

ments presented. These were all on the surface and could be seen at a glance. How could the Principal, of all men, be indifferent to them? He knew the price that his predecessors, as well as men like Dr. Nelles, had been obliged to pay, for trying to minister to the culture of the people; and it was evident that the struggles of the past were trifling compared to those that would be required in the immediate future, if it was decided to go on, building up a centre of thought and culture in Kingston, worthy of the men who met in Hamilton fifty-four years ago and decided to begin the work, in the faith that the heroism of Canadian Scotchmen and Presbyterians was at their back. We were absolutely free, too, to move from Kingston. The city had received much from and done nothing for the University; and no benefactor had made gifts conditional on its remaining on its limestone foundations. In these circumstances it was natural to expect that opinions would be divided, especially when our whole constituency was called into council. Every one who had ever contributed a dollar to Queen's was consulted by a circular that explained the scheme and asked him to vote, with or without explanations. When the Chancellor suggested this method of procedure, I for one did not see its wisdom. It seemed to me an invitation to divide our forces; for it was almost impossible to believe that many would not be found eager to escape from further financial responsibility, when so wide a door was opened. But the impossible happened. Only two voted for Federation, and neither of the two was an alumnus. That put an end to doubts and fears. It settled the question forever. No similar proposal will be made at any future time, no matter what our condition may be. We go forward, believing that all that is needed for legitimate development shall be supplied in God's good time, and that He has a work for us to do that must not be left undone. This preface to the story of the year would not be complete without calling attention to the well-weighed language of the Lieutenant Governor of the Province this afternoon. A graduate of Ireland's great University that has lately celebrated its Tercentenary, he understands what a University is and how egregious is the folly of trying to establish one, without the prospect of sufficient capital to enable it to do its work; but he publicly approves our choice, believes that it was in the interest of the country and is sure that we shall see it vindicated with increasing emphasis each succeeding year, though none of us is likely to live long enough to see anything like a full triumph.

NUMBER OF STUDENTS.

Under-Graduates in Arts..	....	....	....	....	....	252
General Students in Arts..	....	....	....	....	....	25
Post-Graduates in Arts ..	....	....	....	....	....	13
Under-Graduates in Law..	....	....	....	....	....	4
Under-Graduates in Medicine	124
Under-Graduates in Theology	26

Total	444
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Or, allowing for double registrations, 432.

DEGREES CONFERRED.

At Convocation, degrees in course were conferred as follows :—

In Medicine, 23, of whom 2 were women.

In Theology (4 Testamurs and 4 B. D.'S.) 8.

In Law 1.

In Arts, 23, of whom 13, were Bachelors and 10 Masters of Arts.

The comparatively small number of degrees in Arts is due to a cause that reflects such credit on the spirit of the students that it should be noted. Four years ago the Senate instituted a number of Honour Courses, leading to the degree of M.A. It is extremely difficult to pass in any of these, in the usual period of four years ; but though foreseeing that, nearly half of the class that then entered the university took advantage of the developments of study proposed and consequently they will not attempt to graduate till next year. In an age when leading universities are shortening the undergraduate term to three years, it is gratifying to find that our students are ready to spend five years at their Arts course, and that some of them remain longer still as Post-graduates. A better proof of their own wisdom and of their confidence in their Professors and of the opportunities to be now found in Queen's for obtaining education as distinct from routine and cram could not be desired.

The degree of LL.D was conferred on His Honor George A. Kirkpatrick, B.A., LL.B. (Trin. College, Dublin) ; on Henry T. Bovey, Dean of Faculty of Applied Science, McGill College, and on Donald Maclean, M.D., Detroit, Mich., U.S.A.

The degree of D.D. was conferred on the Rev. Kenneth J. Grant, Missionary in Trinidad ; and on the Rev. D. Coussirat, B.D., Professor of Oriental Languages, McGill University and Presbyterian College, Montreal.

SCHOLARSHIPS.

Last year's report called attention to our need of Scholarships for post-graduate and tutorial work in the university, or for travelling Fellowships. It gives me great pleasure to announce that a beginning has been made by the generous action of Her Majesty's Commissioners for the Exhibition of 1851. They have set apart their surplus to establish such Scholarships, in the departments of Physics or Chemistry, and have placed these at the disposal of colleges and universities at home and in the Colonies. The four universities in Canada selected by them are Dalhousie, McGill, Queen's and Toronto. The value of the Scholarships, which have been so wisely established, is £150 sterling per annum each, and it is intended that the student who receives one shall hold it—if he proves worthy—for two years. For the one which has been given to Queen's for 1893, the Senate has nominated Norman R. Carmichael, M.A., to the Com-

missioners. The next will be available in 1895. Now that the Mother Country has been so generous, I trust that Canadians will follow the example, and that we shall have similar Scholarships or Fellowships in every important department of university work. This is the way in which our best young minds can be trained to become leaders of sound thought and wise action.

PROPOSED SCHOOL OF MINES AND AGRICULTURE.

In last year's report it was mentioned that we had developed our practical science work, since opening the John Carruthers Hall, so as to form a nucleus for a School of Mines. The total cost of this to the University is about \$3,000 a year, over and above what was previously spent on chemistry. There are no funds to meet this expenditure. Besides, it would need to be trebled to make anything like a School of Mines. The building, it was pointed out, could also be used for part of the work usually done in Schools of Agriculture. But, as was then said, "this is work for which the University has no funds. It must be undertaken by the government or by some board of public-spirited men who are willing to give time and money to carry out such work. . . . The University has now demonstrated that there is a demand here for practical scientific training, and it seems to me that it is the duty of those who are specially interested in industrial development to take the school out of our hands and prosecute the work more vigorously than we can do." Since that report was submitted, action has been taken along the lines indicated. Public meetings were held in Kingston last summer, and a body politic has been incorporated to establish a School of Mines and Agriculture. The governors of this body have negotiated with your Finance and Estate committee for a lease of the Carruthers Hall for ten years, with right to purchase; also for some land adjoining on which additional buildings might be erected as required; and your committee have entertained the proposals favourably. The governors have also raised a capital sum of \$35,000, which they hope to increase soon to \$50,000, payable in ten annual instalments; and they are applying to the Legislature for an act giving them additional powers. The Provincial Government has put in the estimates the sum of \$6,000 for the proposed institution, \$5,000 to be for the proposed School of Mines and \$1,000 for Agriculture, on condition that the governors spend a like sum annually; for it is conceded that \$12,000 is the smallest amount on which such a school could be maintained. In all probability, double the amount will soon be required, for the sum put down for Agriculture can hardly be looked upon as more than enough for an experiment; but the governors will extend operations only as the demand increases and the need is demonstrated. Meanwhile, the governors are considering how the \$6,000 required of them can be raised. Nearly half the amount can be realized

from subscriptions and fees ; but unless the other half is voted by the municipalities likely to benefit by the school, I see at present no prospect of getting it elsewhere. In that case all that has been done and promised will be of no avail. If the School is not established, the blame will fall not on the Provincial Government nor on the individuals who have given time and money unselfishly for the work, in the not unreasonable expectation that it would appeal irresistibly to every one interested in the material as well as the educational development of Kingston and Eastern Ontario. Queen's is interested indirectly in the success of the proposed institution and that is my apology for referring to it ; but Kingston, with the surrounding country, is vitally interested in it, and the people—when this is understood—will not be slow to help themselves, as the prime condition of getting help from others.

BENEFACTIONS RECEIVED DURING THE YEAR.

In addition to the scholarship from the Mother Country, to which I have already referred, which capitalized would amount to \$15,000 ; and matriculation scholarships from His Excellency the Governor-General and the Mayor of Kingston ; and \$75 a year for the next five years from Hugh Maclellan, Esq., Montreal, for a student of the Women's Medical College who may be prepared for the foreign field ; and a prize of \$25 from the minister of St. Andrew's Church, Kingston, to be given in the Faculty of Theology, the following benefactions received during the year may be specified :

(1) Mrs. Atcheson, widow of Dr. Atcheson, of Smith's Falls, left to the University a farm, which, when sold, was to be apportioned by her executors, for objects in connection with the Arts and Medical Faculties. The proceeds of the bequest, amounting to \$3,460 were received during the year. The money was appropriated by the executors for Qualitative and Quantitative Laboratories in the Carruthers Hall, and to equip Physiological, Pathological and Bacteriological Laboratories in the Medical building, all of which bear the names of the testatrix and her husband. There remained \$892, and of this \$642 were appropriated for the extension of the library and \$250 to aid the Governors of the Hospital to erect a theatre for *post mortem* examinations.

(2) The late A. T. Fulton, of Toronto, long a partner in the business of the late James Michie, whose services to Queen's will never be forgotten, left by his will a legacy of \$3,000 to the University. The treasurer has received this bequest from the executors, who generously paid it soon after his death, and it is for the trustees to determine to what object it shall be appropriated, so as best to honour his memory.

(3) It was announced last year that the Hon. Senator Gowan, LL.D., had sent \$500 to be the nucleus of a memorial lecture-

ship or chair of political science, to bear the name of the late Right Honourable Sir John A. Macdonald, one of the founders of the University. Three additions have been sent in to this nucleus during the year, viz.: Friend of Sir John, \$456.80; a lady, \$20; another contribution from Senator Gowan, \$400. No canvass is made for this object. If the cairn is to be built, stones must be placed on it voluntarily. When completed, it will be a monument more useful and lasting than any of bronze or marble.

(4) Dr. Knight, the Professor of Animal Biology, when in Scotland last summer, had opportunities of inspecting the best modern apparatus, and I authorized him to purchase what was required for the class-room and laboratories. We opened a subscription list to pay for it, as it might be delivered in Kingston. The following contributions have already been sent in for this purpose: The Chancellor, \$130; Professor Knight, \$100; the Principal, \$100; Professor Williamson, \$40; Professor Anglin, \$25; a medical graduate, Toronto, \$25; Dr. V. H. Moore, Brockville, \$25; Dr. G. J. Neish, Jamaica, W. I., \$25; Dr. J. V. Anglin, Montreal, \$10; Dr. John L. Bray, Chatham, \$10; Dr. T. H. Balfe, Hamilton, \$5; Dr. Preston, M.P.P., Newboro, \$5.

Further contributions are urgently needed, but there are other friends, our medical graduates especially, who will complete this work which has been begun so well.

BENEFACCTIONS ANNOUNCED DURING THE YEAR, BUT NOT YET
RECEIVED.

(1) Last summer the late John Roberts, of Ottawa, bequeathed \$40,000. This amount will be paid on the first of July, and I am happy to be able to state that Mr. John Roberts Allen, his cousin, and one of the executors, intends to add to the amount, that it may be appropriated most in accordance with the testator's wishes. The trustees will take final action on this matter when they meet.

(2) Another old friend of Queen's, the late Michael Doran, of Kingston, who recently departed this life, gave by his will a generous share of his estate to the University. How much it may amount to is not yet known, but it will probably be enough to endow a chair that will link his name with Queen's for ever. The executors have three years to wind up his estate.

Nothing shows better our financial strength and weakness than the lists of benefactions now submitted. The two bequests just mentioned are the largest made as yet to Queen's. This, in an age when universities receive in a single year more than the entire capital we have accumulated in half a century, may cause the friends of rich institutions to smile at our poverty. We neither conceal nor parade our poverty, knowing that though poor we are making many rich, and knowing, too, that

few universities can boast as many friends as Queen's—as many who, though possessed of scanty means, are always willing to respond to every call. Every year, I am able to announce more than a dozen benefactions. They may be only for \$5 or \$100; but they show how many hearts are with us. Knowing this, we can afford to labour and wait.

REVENUE AND EXPENDITURE.

The treasurer's report shows an accumulated deficit of over \$12,000. The deficit for the year is \$3,600, and the finance and estate committee report that it is impossible to get investments at the old rates and that a permanent reduction of revenue is inevitable. The gravity of the situation demands all the consideration that can be given to it by the trustees.

THE MEDICAL FACULTY AND THE NEW CHAIR OF ANIMAL BIOLOGY CONNECTED THEREWITH.

It was decided last year to revive the medical faculty of the University. The step has been taken, and I have to report that the new faculty has completed its first session, and that everything betokens that the results will be in the interests of all concerned and of medical science in this section of the country. Soon after the organization of the faculty, we were called on to mourn the loss of one of its ablest members. Dr. Wm. H. Henderson, Professor of Clinical Medicine. Dr. Henderson was a distinguished graduate of Queen's, and his untimely death was a great blow to the new faculty. His place for the session was filled by Dr. T. M. Fenwick, who discharged the duties of the chair with great efficiency. In connection with the establishment of the medical faculty, it was agreed that the subjects of physiology and normal histology should be handed over to the trustees in the same way as chemistry had formerly been, and that they should appoint a Professor who should teach them along with the subject of animal biology. To this new chair, A. P. Knight, M.A., M.D., was appointed, and he has addressed himself to its duties with much enthusiasm. Before the next session begins, he will have his rooms and laboratories equipped with the best modern apparatus, so that the important subjects entrusted to him shall be taught according to modern methods and with modern appliances. Dr. D. Cunningham, M.A., has acted as his assistant, and has given the greatest possible satisfaction. The trustees become responsible for the salary of the professor and an assistant, or a tutor or tutors, as may be needed, and of a laboratory assistant, and the medical faculty on their part agree that the fees shall belong to the university, without any deduction for the expenses of the faculty. Now that the university has undertaken the responsibility for subjects so important to medical study as chemistry, comparative anatomy, physiology and histology, I hope that it shall soon be able to

undertake other subjects also. Pathology and bacteriology have a claim only second to these subjects that have been so undertaken, and a professor should be appointed as soon as possible who would devote his whole time to them. We can congratulate ourselves on having a well-equipped laboratory now, in consequence of Mrs. Atcheson's bequests and other contributions that are being sent me for the purpose. Seeing that the medical faculty is an organic part of the university, I appeal earnestly on its behalf to all our alumni and friends, and especially to our medical graduates. The members of the faculty have shown such a liberal spirit in the negotiations that led to the union that it becomes a point of honour with us to meet them in the same spirit. They have not only surrendered the fees in chemistry, physiology and histology, but they have set apart one-third of all other receipts for expenses and appliances, and have agreed to act as university examiners without additional remuneration. This work, however, they should not be asked to do any longer than the finances of the university absolutely require. Examining for university rank is purely university work, as distinct from class teaching, and should therefore be paid by the university. I hope, too, that, by means of special gifts for the purpose, the university may be able to equip every department of its medical work in the same thorough way in which the other faculties have been or are being equipped. This cannot be done by talk. It can be done only by wisdom and liberality, and by all pulling together. Acting in this way it has been demonstrated that Queen's University was not only a theoretic necessity for Canada, but a necessity that it was possible to realize. It has been realized, simply because many men and women, animated by an earnest, christian spirit, have so willed it. Can we do the same for medical, that we have done for general education, is now the question? The number and the quality of the students that come to Kingston to study medicine proves that there is a demand. Unless we can give these students as sound a training as they would get elsewhere we have no moral right to receive them. But we have decided that we can, because while larger centres of population have certain hospital and other advantages that Kingston has not, we believe that we have special advantages of our own that compensate for those we have not. On last University day, the chairman of the Hospital Board assured us of his determination to do all in his power to assist the Medical Faculty. This was shown last summer by the erection of a suitable theatre for *post mortem* examinations, and he promised that before long there should be a first-class theatre for operations. A maternity wing has also been decided upon, as well as other improvements that will make the hospital complete. In this connection, the new Hotel Dieu, with its admirable equipment, should be mentioned, for its advantages, too, are kindly thrown open to the students of

medicine. Having undertaken a Medical Faculty, then, with our eyes open to all that it involved, I ask every friend of Queen's to do his duty towards it. In modern parlance, the Medical Faculty has come to stay.

UNIVERSITY EXTENSION.

I called attention in my last report to the formation, at the instance of the Minister of Education, of a Dominion Association to promote "University Extension" on lines similar to those on which the movement is conducted in Great Britain, and pointed out that such an association was not likely to accomplish anything practical on an extensive scale; that the form in which University Extension is likely to be useful in Canada has yet to be determined; and that our duty was to continue the work the Senate had commenced, in making provision for extra-mural students who had matriculated but were unable to attend college classes, and in establishing courses of lectures in Ottawa, where the instruction given was so continuous and systematic that it might be considered the equivalent of university study so far as it was taken advantage of. During the past year we have prosecuted our extension movement with success on both of these lines that we had previously marked out and tested, and we have also made a beginning along a third line, with the same general object in view of bringing the university into closer touch with persons and classes outside, who are prepared to receive some of the benefits that a university offers. Our Theological Alumni arranged for a conference of graduates and others to be held for ten days in Kingston in order to study special courses previously arranged for and outlined in a syllabus, prescribing books to be read on the different courses. This Conference of Graduates and Alumni was held in February last and proved stimulating and helpful in other ways. Most of those who attended had studied one of the prescribed courses before coming, and some had written papers that were read and criticized during the conference, and very naturally these received the greatest benefit; on the principle that education cannot be imparted but that men must educate themselves, and that the wisest Professors are not they who seek to cram or force the intellect, but they who endeavour after the manner of Socrates and one still greater, to quicken intellect, to bring thought to birth, to hold up ideals and impart life.

This was the first Conference of the kind that has ever been held in Canada during the ordinary University session. It was an experiment and the universal testimony was that it succeeded, without in the slightest degree disturbing college work. At its close the following resolutions were passed by the Alumni:

"Resolved, that we, the members of the Association in attendance at this Conference, express our very great appreciation

of the courses or lectures given during the past ten days by the Principal and Prof. Watson in the subjects outlined in the programme of study, and also of the lectures given by other members of the faculty; and that a copy of this be sent to the Principal, with the request that he express our gratitude to the other professors whose lectures we have been privileged to attend.

"Resolved further, that we express our conviction of the great value of such a course of study, and ask the committee in charge to recommend the annual meeting to make arrangements for a similar course at such time as may be deemed advisable."

The Alumni, in considering the question of how such a Conference could be made permanent, have come to the conclusion that a Lectureship should be established, on the model of the Baird, Croall, Cunningham, and other Lectureships in Scotland, and the Bampton and Hibbert in England; that the first person to hold it should be one of the professors of Queen's; that he should treat some subject bearing on the relations of Philosophy and Theology during the meeting of the Conference; that his lectures should be printed thereafter; and that the Lectureship should be held for not less a period than three years. I cordially support this proposition, and hope, that some true Canadian will give effect to it before University Day next. The smallest sum that could be named for this object would be a sum sufficient to yield \$250 per annum. While these lectures would be the special feature of each Conference, the Alumni from a distance could also attend other classes in Theology, Science or Arts, and efforts would be made each year to have two or three Professors treat, during the meeting, special departments or divisions of their subjects, so that those attending would be able to study continuously along any line for which their previous training or reading had fitted them.

CONCLUDING REMARKS.

The various reports submitted call for careful consideration. Each department demands extension. Although no reports have been asked from Professors who do not require additional expenditure in the form of apparatus, laboratories, specimens, books, or equipment of any kind, save what is to be found in the Library, even in their case assistance is needed. Professor Dupuis' statement regarding the necessity for an Assistant, instead of a Fellow, in Mathematics, can hardly be disregarded or even postponed, in view of the state of his health and the high standard to which he has brought our mathematical work, after laying the foundations on which we have built up the departments of Chemistry and Natural Science. So, too, another Fellow in Modern Languages is urgently needed. At present, Professor McGillivray has to do the whole Pass and Honour work in French, German and Italian, assisted only by one Fellow.

The Librarian's Report states very modestly one of our most urgent needs. Professor Shortt has made the subject of Political Science one of the most effective as well as popular disciplines in the University ; and he has conducted classes successfully in Ottawa for two winters at the cost of much personal labour and inconvenience. He asks now only that he should be allowed to give his whole time to this important department. It is a reasonable request and in the interest of the University ; but it is impossible to listen to it, until some one provides us with at least \$500 a year to pay a Librarian. It is not much to ask for one Librarian to attend to 20,000 volumes, that are in constant demand, and on an infinite variety of subjects, by hundreds of students ; but that is all that is asked, and I can hardly express how very grateful I should be to any one who would enable us to obtain such an official. The modesty of the request may be estimated when it is stated that in McGill the sum of \$4,000 a year has been provided by Mr. Peter Redpath for maintenance of Library and the Librarian's salary.

The reports of the Librarian, of the Curator of the Museum, the Superintendent of the Observatory, the Professors of Chemistry, of Physics, of Botany and Geology, of Animal Biology, and of the Committee of Finance and Estate, will follow in the next number of the QUARTERLY.

G. M. GRANT, *Principal*.

LECTURESHIP OF MUSIC.

At a meeting of the University Council last April, the proposal to establish a Lectureship of Music was discussed and received with favour.

A Committee was appointed to consider the matter and take any steps necessary to realize the proposal. The following are members of the Committee : G. M. Macdonnell, Esq., Q.C., Chairman ; Rev. W. T. Herridge, B.D., Ottawa ; Rev. G. M. Milligan, B.A., Toronto ; M. Lavell, Esq., M.D., Kingston ; Prof. Watson, Prof. Shortt, Prof. Knight, and Prof. Dyde, Sec.-Treas.

The Committee decided that Prof. Dyde, the Sec.-Treas., should make the friends of Queen's acquainted with the proposal at once, and requested him to give an outline suggesting the way in which music might be taught to University students. No systematic canvass is to be made at present, although several contributions have already been volunteered.

The Treasurer will be glad to receive subscriptions and to answer all inquiries.

LETTER FROM THE CHANCELLOR.

The subjoined letter needs no comment. The Chancellor has taught us to expect such things from him. In now relieving the Alumni Association from the burden, he will inspire them with the determination to secure, as soon as possible, a permanent endowment for the lectureship.

OTTAWA, June 1st, 1893.

MY DEAR PRINCIPAL,—

In the last issue of the Journal I read selections from your annual report, with regard to the proposed Lectureship in connection with the conference of the Theological Alumni of Queen's. They recalled to my mind the meeting at which I was present during Convocation week, on which occasion I was greatly struck with the spirit of those present and the reason advanced to show that such a Lectureship would be beneficial.

I think there should be no delay in making a beginning and, if no other person has come forward, I desire to express my willingness to contribute the sum necessary for the next three years. As to the Lecturer, it seems to me that no one could better fill the position than Dr. Watson, who did so much to make the first conference a success.

Believe me,

Yours faithfully,

SANDFORD FLEMING.

THE VERY REV. PRINCIPAL GRANT,
Queen's University.

NOTE.—Pages 80 to 91 of this number are supplementary.—Ed.

QUEEN'S QUARTERLY.

VOL. I.

OCTOBER, 1893.

No. 2.

All articles intended for publication, books for review, exchanges,—and all correspondence relating thereto—should be addressed to the editors, Box A, Queen's University, Kingston, Ontario.

THE NATURE AND SPHERE OF POLITICAL SCIENCE.

ALTHOUGH from one point of view Political Science is quite a new development, yet from another it is but the revival of an old line of thought which found its most complete expression in the *Politics* of Aristotle.

Before they suffered political extinction, the Greeks and Romans had brought the social and legal sides of Political Science to a very advanced point. But, from that time down to the dawn of the modern era, such a science was rendered practically impossible through the absence of the conditions on which it depends. As a living branch of study it implies this first condition, that the well-being of at least a considerable section of the community should be recognized as the basis of government and law. Where law and authority are expressed in the arbitrary commands of a despotic ruler Political Science cannot flourish. True, there were writers on certain elements of the subject during, and immediately after, the Middle Ages; but they produced, for the most part, mere echoes of the earlier writings, quite out of harmony with the conditions of their time. Only one new question arose to disturb the philosophic calm of all those troubled centuries, the question as to whether the emperor or the pope should exercise the supreme authority in the state. This was the occasion of the only two political works of any conse-

quence during the whole period. *Of the Government of Princes*, by Thomas Aquinas, and the *De Monarchia*, by Dante, represent the best that was written on each side of the controversy. Yet the original elements in these productions are interesting mainly as showing how difficult it was, under the existing political and social conditions, for even the best minds of the age to produce anything worthy of serious thought. Only when we come to the time of Machiavelli, at the beginning of the sixteenth century, do we find something original and at the same time scientific. Freely accepting the position that the good of the ruler is the main object of government, he proceeds to set forth the conditions necessary to this end. Yet, taking, as he does, a liberal view of the good of the ruler, he comes round to the position that in most respects it coincides with the good of the subject. His real interest, as his writings abundantly show, is the good of the subject, and his general conclusion is that the wise ruler, looking to his own interest, will find it best served in respecting the interests of his people. In his theory of government, so far as it is worked out, everything is approached from the point of view of the ruler. The same point of view prevails in all the subsequent developments of Political Science down to very recent times. Thus, in the writings of Bodin, Spinoza, Hobbes and Locke, two chief questions claim attention,—the nature of sovereignty and the authority of law. In such a science there could be little room for social or economic elements, hence we find them receiving very scant and subordinate treatment.

The economic side, however, was at the same time finding a modest development of its own under quite another patronage, yet always from the point of view of the sovereign. Modern Economics, as a special science, finds its origin in public finance. It arose from the efforts to reduce taxation to some sort of system and to place it upon a sound basis. Thus the first economic writings are little more than treatises on taxation, or the ways and means of raising the government revenue.

At the beginnings of modern nations the functions of government were very limited. They consisted in little more than the keeping of a rather uncertain peace, and the administration of a somewhat uneven justice. The government revenues were practically the personal revenues of the sovereign, drawn largely from

his own private estate, and rather arbitrary and uncertain as to the amount obtained from other sources. Experience gradually proved that the systematic and regular levying of moderate contributions produced much more revenue in the long run, than the arbitrary and irregular levying of large contributions. The introduction of system in the raising of revenue was partly the cause and partly the consequence of a growing recognition of the claims of the people upon the government. Thus it came to be recognized that, in order to insure a good revenue, it was wise policy to promote the prosperity of the people. Tracts began to be written on the best means for increasing the general prosperity with an eye to the ultimate increase of the revenues. Following along these lines, chiefly in France and England, the modern science of Economics was gradually built up. Thus, from the nature of its origin, Political Economy came to be concerned entirely with the question as to the greatest possible increase of wealth, first with reference to special rulers, then with reference to the subjects of these rulers, and finally, with reference to individuals in general, wherever they come under the ordinary commercial conditions of the civilized world.

We thus see how these two branches of what was, under the Aristotelian treatment, one science, came to be separated, in the modern world, into two sciences apparently quite independent of each other. This separation has serious disadvantages. On the one hand, an exclusive consideration of the central government and its functions tends to give to it a power and importance which it does not, and should not possess. It prevents the central government from being seen in its true perspective with reference to the other organs of society. On the other hand, to take as the basis of an independent science the subject of wealth and the best possible means for its production and accumulation, produces a tendency to regard wealth as in itself a kind of final object. Smith and Mill were not in this respect so rigid as many of their followers. With later economists the desire for scientific exactness has led to the greatest possible exclusion of all considerations as to the proper use of wealth. There is, it is true, in Political Economy an element which admits of rather precise treatment, namely the conditions necessary for the production, exchange and distribution of wealth. It is altogether desirable

that this element should receive definite and separate treatment. But it is not so desirable that this treatment should be elevated to the position of a separate science. If we could regard the production of wealth as we do any ordinary chemical or biological processes in nature, there would be no objection to make the study of its conditions a separate science. But the getting of wealth implies the using of man as one of the agents to that end, and we have constantly to ask to what extent this is justified. Thus the question of the production of wealth becomes but a subordinate part of some other subject concerned with the ulterior objects of men in society.

The defects of the previous treatises on the political and economic sides of our subject were not serious in their own day. Most of the defects are due to the very great changes which have since occurred in political and commercial relations.

The structure of the modern civilized world compels us to regard all social matters from the point of view of the people. We have to regard governments as instruments of the people, not the people as instruments of government. In fact we must look upon governments as simply one set of organs, among many others, through which the people seek to realize themselves. But this changed point of view must of necessity lead to a change in the treatment of economic and political relations. It requires also the definite recognition, in any scientific treatment of society, of that important social region which lies between the production of wealth, on the one hand, and the administration of government on the other. Within this region we find a multitude of organs, most of them of rather recent growth, through which the community expresses an interest in special phases of its progress. Here we find most of the local and municipal institutions. Here, too, are all those associations for the furtherance of philanthropic, religious, educational, artistic, literary and scientific interests; and all those partly economic, partly political organizations, such as boards of trade, chambers of commerce, labourers' and employers' unions, mutual benefit societies and a host of others of lesser note, each in its own way giving expression to collective, as distinguished from merely individual interests. Each of these, according to the range of its influence, is as much an organ or channel through

which society expresses its capabilities and seeks its realization as is the central government itself.

Again, in recognizing the central government as only one, though as yet the most important, of social organs, we must observe also that the limits which confine it have no necessary reference to the other organs. The central government is, from the nature of it, confined within a definite territory, which constitutes the country of a nation. Most of these national limits are quite arbitrary, having been fixed more by accident and the fortunes of war than by their natural fitness to serve as dividing lines between nations. Yet, so long as international jealousy and hatred prevailed, so long as communication, trade, legal rights and personal protection were impeded or denied as between countries, the range of the other social organs, though having no necessary connection with territorial limits, was yet largely determined by them. Now-a-days, with the removal of many of these impediments, and the decay of that patriotism which glorifies war and sees in every foreigner an enemy, the religious, professional, educational, artistic, literary, scientific, commercial, labour and other social organizations are rapidly losing sight of mere territorial limits and are bringing into union on quite other grounds all those, wherever found, who have special interests in common. Thus there has come to be less exclusiveness between kindred nations of the present day than there used to be between kindred municipalities. While the previous Political Science was more or less strictly national in its range, modern Political Science is required to be international or cosmopolitan. It must, at least, have regard to all those nations which are associated in a kindred civilization, and whose citizens are powerfully influencing each other in economic and social, as well as strictly political matters. In a word, the social conditions, means and aims of *civilization* constitute the sphere of modern Political Science. We are compelled to go considerably behind the science of wealth, on the one hand, and considerably beyond the science of government on the other. We have to ask many previous questions with regard to the nature of man as a social being and the circumstances in which he is placed, and we have to ask many ultimate questions with regard to the final aims and objects of society.

In determining the nature of man's capabilities and conditions, and in determining the range of his possibilities in the physical, intellectual and moral spheres, we have to depend upon the results of other studies both scientific and philosophic. On the economic side there is a close relation with the results of the physical sciences; on the social side our subject joins hands with Ethics, while on both sides it depends on History.

As, between physics and chemistry, or between chemistry and physiology, there is a border land which is common to both, but which is approached by each from different points of view, so, especially between Ethics and Politics there is considerable common ground, but it is approached by each from a different standpoint. Ethics regards this ground mainly from the point of view of individual conduct and motives. Politics regards it from the point of view of collective needs and purposes. All political and social problems have an ethical basis, just as all physiological questions have a chemical basis. But that which makes the problem distinctively political or social, rather than ethical, is an entirely additional element with laws and conditions of its own; just as that which makes a question physiological, rather than chemical, is an entirely new element with new laws of which Chemistry knows nothing.

The special study of organized society will require us to consider what the aims and objects of such a society must be. These may be summed up in the general statement, that it aims at securing for its members a continually developing civilization. Farther, as this civilization must be open to the whole people the individuality of each person must be respected as well as the individuality of nations. But this is not an individuality of isolation and independence. It is just because society requires of the individual to forget himself as a mere individual, and to identify himself with social objects and purposes that it can make so much of him in the end, and give to him a new and infinitely richer individuality which is the common product of the whole world. The same applies to every organization within society, including nations themselves. Of course this requirement is not always met. Many individuals and social organs take up as final what is but a narrow and mean fragment of the great social well-being, and thus fail to obtain that fuller individuality which a civilized com-

munity makes possible. Even our existing social organization puts at the service of most of its members a wonderful range of resource. Thus it is literally true, even on the material side, that the daily comforts of an average civilized man may represent the co-operation of more than a million of his fellow beings; while the making a civilized man of him may represent well nigh all the higher efforts of civilization in all ages.

After determining the objects of an organized society, we have next to ask what are the means and instruments by which these objects are to be attained. These will be either material,—depending on physical properties and forces,—or spiritual,—depending upon mental, moral, religious or æsthetic conditions. We have to consider, then, how each of these means is to be adapted and applied to its purpose. We do not go far before finding that the sum of the material means of civilization practically constitutes wealth. Wealth is simply the sum of all those material means which people are anxious to get in order to realize their aims and objects. The study of the conditions necessary to the most efficient production, exchange and distribution of wealth constitutes Political Economy. Thus we see exactly where this department fits into the general science of society. It is the science of the material means for the development of civilization. Where this is fully recognized the folly of taking wealth, which is only the first stage towards the goal, for the goal itself, becomes rather manifest. Having considered the material means of civilization we have next to consider the spiritual means. These on their social side are represented by the various organs, lesser or greater, through which society expresses itself or seeks to promote special objects. With reference to these the chief questions are,—how do their objects harmonize with the general objects of society; what are the elements which they contribute; are these elements worthy of the social energy and means which they absorb; are the organizations well or ill suited for the work which they have to perform? With the technical details of each we are not specially concerned. The most important of all these organizations—the State—must receive a corresponding share of attention. And here, as elsewhere, our science must make free use of the results

of other special departments of study, such as Law, constitutional and general History, &c.

A word or two, finally, as to the method of study suitable to our subject. Where the facts of a science remain unchanged, the only requisite is a systematic classification of them, and an explanation of their relations to each other. The facts remain constant, our knowledge of them develops. In Political Science not only our knowledge of the facts, but the facts themselves, are constantly developing. Yet, since the development is not arbitrary, but constitutes, in the main, a progress, we are able to determine certain definite principles in it. In the variable element incident to progress temporary questions must receive special treatment in accordance with the circumstances and conditions of their time. But, though the results may become obsolete with a change in conditions, they may be none the less scientific and accurate while the conditions continue. Thus the object of Political Science as a subject of study is not to supply definite and final solutions for all social questions. The great variety in social relations and the constant changes to which they are subject, render this method useless. Our method must be to discover and point out, first, the more fundamental ideas which guide the progress of society, next, to show how the secondary principles are related to these and the relative importance which they possess, and finally, we must exhibit the use of these in dealing with special concrete questions, where we have to take particular note of individual facts and details as well as of general principles. We have to develop an intelligent and comprehensive point of view, and a well-balanced method of approaching and dealing with social relations, which will keep our minds as alive as possible to all sides of a question, enable us to avoid surface impressions and hasty conclusions, and prevent us from rushing into absoluteness and finality in the settlement of questions which relate only to passing phases of progress.

When pursued in the spirit here indicated, Political Science cannot fail to be of the greatest value as an organ of education ; whereas if regarded solely with an eye to concrete results and working formulæ in political tactics, it must be without doubt the most useless study on which a student can waste his time. Nothing can be made of Political Science except through the de-

velopment of independence and originality of thought, openness of mind, and the capacity of mental adaptation to new facts. A training begun on these lines, in connection with such a subject, will find no break in its development even in the busiest life ; for we are all forced to deal, rightly or wrongly, with economic, social and political questions.

ADAM SHORTT.

TIME RECKONING.

1. *Uniform non-local Time* by Sandford Fleming, C.M.G., M. Inst., C.E., F.G.S., F.R.G.S., Engineer in Chief Canadian Pacific Railway, &c. (*Printed for private use.*) London, 1876.
2. *Temps Terrestre, Memoire per* Sandford Fleming, C.M.G., &c. Paris, 1878.
3. *Proceedings of the Canadian Institute*, July 1885. Toronto, 1885.
4. *Time-Reckoning for the Twentieth Century*, by Sandford Fleming, C.M.G., &c. *Smithsonian Report* for 1886. Washington, 1889.
5. *Documents regarding the Unification of the hour, and the Legalization of the new mode of measuring time.* Printed by order of Parliament, Ottawa, 1891.

THE above publications, among others on the subject, refer to the remarkable movement begun about fifteen years ago for the establishment of a better system of daily time-reckoning. This system, wherever, and as far as, it has now been carried out into use, has already greatly facilitated the ever-increasing means of extended communication by Railroad and Telegraph, and is fitted when its principles are yet more fully acted on, to be of still farther essential service both to the transaction of ordinary business, and to science. The origin and progress, therefore, of the efforts made for its adoption are too important not to call for our special notice.

The improvement in the Calendar introduced by Julius Cæsar, with the corrections since made, have left no room for

variation or confusion in our ordinary reckoning by tropical years and their parts. It has been far otherwise, however, with our notation of time by its lesser but fundamental unit, the mean solar day. Every city and town on this continent and over the globe, but a few years ago, had its different hour, minute and second of the day, and often a different day, at the same moment of absolute time. Instead, moreover, of the simple method of numbering the hours continuously from one to twenty-four the rude division of the ancients into 12 A.M. and 12 P.M. was universally retained, and to add to these sources of inconvenience and ambiguity, the Astronomical day had been made to differ from the Civil day, the former beginning twelve hours before the latter, and phenomena and results in Astronomy, Meteorology and Navigation were recorded and calculated sometimes in terms of the one day, and sometimes in terms of the other.

The difficulties and inconveniences arising from these causes, and the want of some uniform system in our daily time-reckoning, have been more and more forcibly brought into view by the rapid growth of railway, telegraph and steamship communication during the last fifty years. They were not so soon felt, nor are they so thoroughly realized, in countries of comparatively small extent as in the British Isles, though there also they exist and have been provided against. The necessity of a change has been most urgently experienced on continents like North America and Europe, or extensive areas like British India. There the vast, and still increasing, number of long lines of railroad and other means of communication has made it evident that the mode of reckoning by local time, until lately everywhere in use, is attended with serious hindrances, and liability to derangement, in the transaction of the ever widening intercourse and commerce of the world. In the United States and Canada, for example, ten years ago, 140,000 miles of railway were run on as many as 75 different local times, and the difficulties thus occasioned in making proper connections, without annoying delays and mistakes, and with due security of life and property, became so great that railway and telegraph directors were at length constrained to seek for a remedy.

As early as 1863 the subject had attracted the attention of Mr. Sandford Fleming, C.E., C.M.G., now Chancellor of Queen's

University. As Chief Engineer, appointed conjointly by the Imperial and Provincial governments, he was then occupied with the survey and construction of the Intercolonial Railway. The main line, extending 678 miles from Halifax to Quebec, connected at the latter city with the Grand Trunk stretching westward to Sarnia about 660 miles farther, and forming with it a continuous journey by rail of 1,338 miles from the Atlantic to Lake Huron. The principal places, Halifax, St. John's, Quebec, Montreal, Kingston, Toronto, London and Sarnia, besides other points on the route, kept each its own time, so that, if the line were to be run by their different local times, the Conductor would have to alter his watch at every new point of departure, until the terminus at Sarnia was reached. Separate time tables also for each city of the arrivals and departures of trains would be required. Such constant changes, and the obvious inconveniences thus resulting would of course be intensified on the completion of the Canadian Pacific Railway from Montreal to the Pacific which was shortly afterwards begun, and of which also Mr. Fleming was appointed Chief Engineer. In such circumstances, becoming more and more impressed with the necessity of adopting another mode of time reckoning, he was led to propose a system which would not only get rid of all these difficulties but would afford a complete solution of the problem of one uniform daily time notation throughout the world.

The system which he proposed was first published and fully explained in a pamphlet printed for private circulation in London, Eng., in 1876, and another to the same effect in French, printed in Paris in 1878, during the "Exposition Universelle." The views presented by him in these publications, displaying as they do his lucid and comprehensive grasp of the whole subject, have called for no essential alteration since either by himself or by the eminent theoretic and practical men by whom they have been with signal unanimity welcomed and endorsed. They were soon afterwards, in the winter of 1878-79, brought under the notice of the Canadian Institute, by whose Committee, as we shall see, the first important step was taken for their being submitted to the consideration of a number of scientific bodies in other civilized countries in Europe and America.

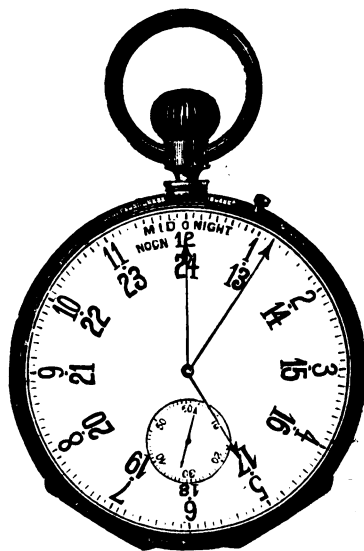
The system proposed by Mr. Fleming was, that the earth's surface being divided into 24 zones or lunes by meridian lines distant from each other by 15° , or one hour, the time for the regulation of the operations of railways and all ordinary business within each intervening area should be that on the nearest meridian line. In this way, in the intermediate space, good clocks and watches would move synchronously, would shew the same hours, minutes and seconds at any moment, and the complications arising from the necessity of having continual reference to ever varying local times would be altogether done away throughout one twenty-fourth of the surface of the globe. At the Equator, for example, for upwards of 1,000 miles, and at the Latitude of Kingston for about 730 miles, the conductor and the passengers on a train would have no need to shift the hands of their watches at the several places on their way, they being all adjusted to the time at one of the Standard Meridians, in the case of Kingston that of Long. 75° W. The manifest and great convenience for general business purposes, also, would be secured of all public clocks and watches everywhere on the route and keeping the same time. In passing from one meridian to another, west or east, the only change required would be to set the hour hand back or forward one hour, no alteration being required in the minute and second hands. It was further proposed by Mr. Fleming, that the altogether unnecessary division of the day into 12 A.M. and 12 P.M., which was fitted only to lead to confusion and mistakes, as experience had shewn them to be, should be ignored, and that the hours should be simply reckoned from 1 to 24. These proposals, utopian as at first they appeared to not a few to be, and insurmountable as seemed the difficulties in the way of their being acted on, it will be seen in the sequel, have already been accepted and carried out into practical effect over large portions of the globe, and proved of the most essential benefit to the working of lines of intercommunication in every direction, and business and intercourse of every kind.

The establishment, however, of this uniform reckoning of daily time over each twenty-fourth part of the earth's surface, constituting what we are now accustomed to term "Standard" time, highly advantageous as it is, was not all that Mr. Fleming advocated and had in view. He regarded it as but a step, though

a most useful one, to the adoption for many scientific, if not immediately for all, purposes of one uniform system of time reckoning everywhere throughout the world to be known as "Universal" or "Cosmic" Time, by which all clocks and watches in every quarter of the earth should be regulated by the time at one meridian alone instead of that at each different separate meridian, and should shew at every instant of local Standard time the same hour, minute and second of one Universal day. In this way the difficulties to which we have alluded would, it is evident, be at once completely removed. But which should be the Meridian where this common day of the world should be taken to begin? Mr. Fleming clearly saw that the difficulties in the way of the substitution of Standard for mere local time were all ultimately referrible to there not having been hitherto any common and recognized initial meridian for daily time as the meridian of Greenwich has been generally recognized as the initial or zero meridian for longitudes. He was, therefore, next led to propose the fixed zero meridian for time as most suitable to be selected that one which is 180° W from Greenwich, at mean noon on which the "Universal" day should be held to begin, and from which the meridians should be counted westward from 1 to 24. For passing, as it happens, almost wholly through the Pacific Ocean, touching only a small part of Kamschatka, and therefore running counter to no national prepossessions and susceptibilities, the various civilized nations might after mutual conference well agree to its adoption.

To illustrate the application of these principles to the indication by our time pieces of both standard and universal time simultaneously on the same dial, let us take for instance a watch shewing our standard time now regulating business throughout a wide extent of the Eastern United States and Canada, or that of the 17th hour meridian or 5 hour west from Greenwich. When it is mean noon on the Anti-Prime meridian of 180° W, or the beginning of the Universal day, it will of course be 12 midnight, or the beginning of the Civil or Prime day at Greenwich, and when 5 hours afterwards, as the earth revolves on its axis, it is 12 midnight or O of the Civil day with us, *five* hours of the Universal day will have elapsed. If then we have our clocks and watches with dials as in the annexed figure, without any change

whatever in the internal works of the time-piece, with the first 12 numbers of the Civil day round their outer edges, and the remaining 13 to 24, to prevent crowding of the numbers, on the inner circle below, and fix another hour hand for Universal time on the central pipe of the minute hand ; so that it points to 5 when the hour hand for Standard time points to O or midnight, we shall evidently, as the hour hands revolve together, have given us at the same moment the corresponding hours, minutes and seconds at once, of the Standard Civil day,



of the Universal day proposed by Mr. Fleming, and of the Greenwich Civil day. When the Standard time hour hand points to 1 in the morning of the Civil day the hour hand of the Universal day will point to 6 shewing that six hours of that day have passed, and so on. By an easy adjustment of the hour hands in like manner for each different meridian, time-pieces will furnish both times at every particular moment when required. Until new dials like that above are generally introduced, which is much to be desired, the dials of the watches in common use may be adapted to shew Standard time continuously during 24 hours by a very simple and inexpensive device employed by the Canadian Pacific Railway on their line.

By the time reforms proposed by Chancellor Fleming, of which we have thus endeavoured to sketch an outline, we not only obviously secure the Standard time for each meridian, but a Standard time for the whole world, in which events from year to year, everywhere and of all kinds, may be recorded in the hour, minute and second of the one common day of their occurrence, and from which the date of all events in past and present history may be exactly determined.

Let us now state as briefly as possible the history of the progress of the movement. Since the first announcement of his views Mr. Fleming in a number of papers and addresses has continued to advocate them with singular ability and success. He has also done very much in various other ways for their promotion, and especially by his influential efforts in the several International Conferences on the subject of the most eminent scientific men in America and Europe, to which the system of time reckoning which he has proposed has led.

His efforts from the beginning and since have met with able and efficient collaborateurs, to whose cordial aid very much credit is due. The first active step in favour of the system was taken, as has already been alluded to, by the Canadian Institute of Toronto of which Mr. Fleming was a member, in 1879. Strongly impressed with the importance of two "remarkable" papers by him read before that Society during the winter of 1878-79, one on "Time-reckoning," and the other on "The selection of a Prime Meridian to be common to all nations in connection with time-reckoning," the Council of the Institute addressed a Memorial to the Governor-General of Canada, the Marquis of Lorne, requesting him to transmit Mr. Fleming's communications to the Imperial Government, in order that they might be brought officially under the notice of as many representative learned societies, and distinguished scientific men, as possible, both in Europe and in America.

His Excellency kindly acceded to their request, and in forwarding the papers to these scientific authorities he invited them to communicate to him their views as to the proposals therein set forth. Among the replies soon afterwards received were two of the greatest weight in their favor, those from the Royal Society in London, and from the celebrated Astronomer, M. Otto Struve, Director of the Observatory at Pulkova. The Royal Society, while pointing out the obstacles from long established usage to its general acceptance, signified its decided approval of the scheme. Mr. Struve declared his thorough agreement with the system proposed by Mr. Fleming, and strongly recommended its adoption. Communications to the same effect were also received from leading scientific men in Germany, Spain, Holland, Belgium and Italy.

Meanwhile, on this Continent, the subject had also been discussed in the Metrological Society of New York. An exceedingly valuable report of its Committee on standard time by its Chairman, Professor Cleveland Abbe, in May, 1879, and published in the following year, entered fully into the impediments felt in railway operations in the United States from the want of a uniform system of time, and proposed, like Mr. Fleming, to substitute for the varying local times the times at meridians each 15° apart, or if it were thought preferable, the time at one standard meridian for the whole United States. The Society, thereupon, passed a resolution declaring that absolute uniformity of time was desirable, and that the meridian six hours west of Greenwich should be adopted as the national standard to be used in common on all railway and telegraph lines, to be known as "Railroad and Telegraph Time."

Copies of Mr. Abbe's report, and additional papers by Mr. Fleming, were in 1880 also transmitted by the Marquis of Lorne to the different learned Societies in Europe, and further contributed to bring the proposed system of time reform under the notice of the civilized world.

At the meeting of the Association for the reform and codification of the Laws of Nations at Cologne in 1881, at which Dr. Barnard, the delegate from the United States took an active part, the question of the regulation of time according to the new system was discussed, and resolutions of approval passed. In the same year it was again fully considered, and resolutions passed in its favor by the International Geographical Congress at Venice. Mr. Fleming, who was there, present as delegate from the Canadian Institute and the American Metrological Society, then took occasion to suggest the appointment of an International Conference on the subject to be held at Washington, and was warmly seconded by gentlemen representing the Government and scientific Associations of the United States. The President of the Congress having communicated the resolutions to the Italian Government, Prince Teano on its behalf undertook to conduct the official correspondence. An important discussion on the question followed at the meeting of the International Geodetic Association in Rome, in 1883, when the utility of one uniform daily time reckoning was recognized, and a special Inter-

national Conference for the establishment of a general agreement on initial meridians for longitude and time recommended.

While the movement was thus gaining ground in Europe it continued to be actively prosecuted on this Continent, and steps were being taken for paving the way to its being put into practical operation without delay. At a Convention of the American Society of Civil Engineers in Montreal in 1881 the subject was brought before it by Mr. Fleming, and a committee of five leading men engaged in the management of railways, together with Prof. J. E. Hilgard, General Superintendent of the United States Coast and Geodetic Survey, and Professor Egleston of Columbia College, was nominated to examine the question, of which Mr. Fleming was appointed Chairman. This Committee at the next meeting of the Society unanimously reported their entire approval of the scheme proposed, the mean times at each of the twenty-four meridians to be used as standards for local time, and cosmic or universal time to be employed in chronology, astronomy, navigation, meteorology and ocean telegraphy, and generally on all observations non local in character. The American Society of Civil Engineers, and especially its committee has ever since rendered its powerful support to the scheme by papers in its published proceedings explaining its objects and advantages, and by its active aid in carrying it out into practical realization. With the latter purpose in view, a circular signed by the Secretary to the Society, containing eleven questions on the subject to which categorical replies were invited, was sent to "the leading men in railway direction, either as general managers, superintendents or engineers, and to men of scientific attainments throughout the United States and Canada."

At a convention of the Society held in Washington in 1882, numerous replies were received and reported on, shewing that the system proposed as to both standard and cosmic time was generally and heartily approved. The Society thereupon resolved to petition Congress to take the matter into consideration, and was seconded in its efforts by a similar application from the American Metrological Society. Joint resolutions of the Senate and House of Representatives followed in July, 1882, authorizing the President of the United States to call an International Conference to meet in Washington "for the purpose of

fixing upon a Meridian proper to be employed as a common zero of longitude, and standard of time reckoning throughout the globe."

During the interval preceding the meeting of this international conference, a convention of Railway Managers, held in Chicago, after some preliminary meetings, resolved without delay to run their lines by standard instead of local time, and on Nov. 18th, 1883, the change throughout the United States and in Canada was made "without any appreciable jar, and without a single accident occurring." The first great step towards putting the system into general operation was thus successfully attained, and in 1884 the American Society of Civil Engineers were encouraged to direct their efforts to obtain also the proposed reform of the notation of the hours of the day. With the view of ascertaining definitely the opinions of railway managers in the United States and Canada on the question, a correspondence was entered into between them and the Secretary of the Society. Replies were received before the close of the year from the representatives of 60,000 miles of railway of whom 98 per cent were in favour of the change from the 12 a.m. to 12 p.m., according to the old division of the day, into 24 continuous hours. Since then no less than 403 presidents, managers, superintendents, and engineers in all, representing an aggregate length of railway of about 140,000 miles, have sent in replies in favour of the proposed change; shewing that its adoption would be as easy, as it would be beneficial in its results.

It is not surprising therefore, that Mr. Fleming should thus express his gratification at the practical realization so far already effected, of the aims of his own unwearied exertions, and of those who took an active part with him in their prosecution; "Six years ago when the subject was first discussed in the Hall of the Canadian Institute, there were probably not a few who viewed the propositions then submitted as merely fanciful theories. Others, who did not refuse to recognize their bearing, entertained the feeling, that many grave difficulties presented themselves to interfere with any successful attempt to reform or modify usages so ancient as the computation of time. What are the facts to-day in 1885? Twelve months have passed since an important change in the reckoning of railway time was made with general approval

throughout the length and breadth of North America; a revolution in the usages of sixty millions of people has been silently effected and with scarcely a trace that it has happened; and that proceeding has been followed by events of equal importance."

On the 1st October, 1884, an international conference on the whole subject was held at Washington, and was attended, on the invitation of the President of the United States, by accredited delegates of distinguished men from twenty-five civilized nations. Their deliberations continued until the close of the month. It was manifest that a decision as to universal time was impossible without the general recognition of a Prime Meridian, therefore the Conference unanimously adopted as their *first* resolution, "That it is the opinion of the Conference, that it is desirable to adopt a single Prime Meridian for all nations in place of the multiplicity of initial meridians which now exist." After full deliberation the following *second* resolution was passed with only one vote in the negative, the delegates voting by nations.

"Resolved, that the Conference proposes to the governments here represented, the adoption of the Meridian passing through the centre of the transit instrument at the Observatory of Greenwich as the initial meridian for longitude." The above resolution was adopted by the following vote :

In the affirmative :

Austria, Chili, Columbia, Costa Rica, Germany, Great Britain, Guatemala, Hawaii, Italy, Japan, Liberia, Mexico, Netherlands, Paraguay, Russia, Salvador, Spain, Sweden, Switzerland, Turkey, United States, Venezuela.

In the negative :

San Domingo.

Abstained from voting :

France and Brazil.

In a *fourth* resolution the Conference proposed "the adoption of a Universal Day for all purposes for which it may be found convenient, and which shall not interfere with the use of local or other standard time where desirable." This resolution was passed without a single vote in the negative. The next resolution proposed in the Conference was, "That this Universal Day is to be a mean solar day, is to begin for all the world at the moment of mean midnight of the initial or Prime Meridian, coin-

ciding with the beginning of the civil day and date of that meridian, and is to be counted from zero up to 24 hours." This resolution was adopted with only two votes in the negative; and it will be observed, only puts in another form, Mr. Fleming's suggestion, for when it is noon at 180° it is at the same instant of absolute time midnight at Greenwich, or the beginning of the civil day. The time, therefore, of the universal day proposed by Mr. Fleming becomes in reality and practically Greenwich time, the time at the initial Meridian adopted as above. A *sixth* resolution was also carried without division; "That the Conference expresses the hope that as soon as may be practicable the astronomical and nautical days will be arranged everywhere to begin at mean midnight."

These resolutions were thus passed by such a body of eminent representatives from many different countries as has seldom, if ever, met together for conference on any subject.

The well-known Russian Astronomer, M. Struve, one of the delegates, in giving a report of the proceedings of the Conference at Washington, thus speaks of the high sense which he entertains of Mr. Fleming's labours in bringing about this result: "It is through his indefatigable personal efforts and writings that influential individuals and scientific and practical societies and institutes in America as in Europe have been gained to the cause." In the conclusion of his report, without losing sight of the further aim of one cosmic or universal day for all, he earnestly desires the general adoption, as soon possible, of standard time, and the 24 hour notation on the continent of Europe, as well as in America, and, with regard to making the astronomical and civil day identical, he proposes that, the way being prepared by the progress of a few years, a fitting time for a change would be on the first of January, 1900, when the instant of commencement of the astronomical day and year should in all nautical almanacs be the same as that of the beginning of the civil day and year at that date.

The impulse in favor of the new system of time reckoning given by the Washington Conference has since led to further and rapid advances towards its realization. Great Britain had already adopted the standard time of the meridian of Greenwich. The standard times of their respective meridians also now regu-

late public services and ordinary business in Sweden, Hungary, the Empire of Japan, Holland, Belgium, the States of Wurtemberg, Baden, Alsace and Lorraine, and in Prussia one of the very last speeches of Field Marshal Von Moltke in the Reichstag strongly advocated a similar change from the old system, which has since been finally approved of by the House, and come into legal operation. The 24 hour notation has made less conspicuous but still marked progress. The Canadian Pacific Railway, after a most satisfactory test trial for six months, permanently established its use in 1886 on its line, from Lake Superior to the Pacific coast and was followed soon afterward by a like proceeding on other lines in the North-West, and on the Government Inter-colonial Railway. It is now also in use over the many thousands of miles of railroad in the Empire of India, and the whole of the cables of the Eastern Telegraph Company and its connections from England, through Europe and the Mediterranean to Egypt, and from Egypt to South Africa, India, China and Japan, Australia and New Zealand. A corresponding change in the figuring of the dials of clocks and watches which could, as has already been explained, without the least difficulty be made to suit the purpose, is all that is wanted to facilitate the general introduction of the 24 hour notation, and afford at the same time, as has been shewn, the means of determining universal time whenever it is desired.

In concluding our review of the origin and progress of the movement towards a uniform time reckoning, we only further note the two most recent steps in the same direction taken during the present year. The one is the transmission of a circular by a joint Committee of the Canadian Institute and the Astronomical and Physical Society of Toronto, addressed to astronomers throughout the world, inviting their opinions as to the desirability of carrying out the *sixth* resolution of the Conference at Washington, by making the astronomical and civil day synchronize from the 1st January, 1900, the first day of the new century. The object in view being to make astronomical accord with civil time at the above date, a sufficient interval would thus be afforded for a common understanding among astronomers being arrived at, and for suitable arrangements of the ephemerides which are usually prepared four or five years in advance. Still

more recently, notice has been received of an important discussion at the Postal and Telegraph Conference for 1893 on the hour zone reckoning for Australia. "The discussion at the Conference was whether they should have the reckoning by a *three* hour meridian, or by *one*, and they wisely decided on the latter," making standard time a yet nearer approach to universal time. Sir C. Todd, of South Australia, seconded by Hon. Mr. Ward, of New Zealand, was the mover of the following resolution, which was carried unanimously: "That it is desirable in the public interests that the hour-zone system be adopted in a modified form, so that there should be one time throughout Australia, viz., that of the 135th meridian, or nine hours east of Greenwich." They will thus, it would appear, have the same standard of time in Australia as has for several years been established by official authority throughout the Empire of Japan.

JAMES WILLIAMSON.

DANTE AND MEDIEVAL THOUGHT: CHANCELLOR FLEMING'S LECTURESHIP.

BY the generosity and public spirit of Chancellor Fleming a lectureship has been established, in connection with the Theological Alumni Association, on "some subject bearing upon the relations of philosophy and theology," and the present writer has been suggested by him as lecturer for the next three years. It may not be out of place to remark that there is no reason in the nature of things why only theological alumni should attend. There surely are other sons of Queen's who would find mental stimulation in a short return to their Alma Mater. Bearing this in mind, it has seemed well to choose such a subject as would be profitable to all who take an interest in "the things of the mind." Now, it need hardly be said that at the present day

it has become clear to students in all departments of thought that no subject can be adequately treated except by the historical method, or at least that fresh light is thrown upon every department of thought by seeing the present in the light of the past. The great idea of the nineteenth century is development, and it is hardly too much to say that those who fail to appreciate its importance are not likely to do more than repeat obsolete and anachronistic conceptions. In one way it may be admitted that the prominence of this idea is a sign of transition and unrest. Most of the great thinkers of the race have first assimilated the thought of the past, and have then advanced to new ideas of their own, which at once included and transcended the ideas of their predecessors; and if we had reached the stage when a new system could profitably be constructed, a similar process might be anticipated now. But, so far as I can see, the time has hardly come for a great constructive effort of thought. We have first to go back over the history of past thought, carrying with us the two ideas of the essential unity and the continuous progress of the race, before we can see clearly the direction in which a wider view of the world is to be found. This may be a comparatively humble task, but at any rate it is one that can hardly be avoided. It was under a conviction of the importance of this genetic method of investigation that a study of Luther and the Reformation was last year attempted by the members of the Theological Alumni Association, and the result showed that the method was highly profitable. It would seem natural that the enquiry should be now followed up by a similar study of the successors of the Reformers; but it was found that the Reformation, not being an isolated phenomenon but a phase in the wide process of human development, cannot be properly understood without a comprehension of the phase immediately preceding it. Hence it seems best to devote more attention to the period of the Middle Ages than was possible last year. Now Dante is, as Carlyle says, "the spokesman of ten silent centuries." He is so, indeed, in a very peculiar sense. In one way every great thinker and artist presents to his age the garnered wisdom of the past, but as a rule he presents it only from a special point of view. If he is a poet, he embodies the thought of his time in sensuous and impassioned form; if he is a philosopher, he "rends the seamless garment of

thought" with a view to finding out the elements of which it is composed: but rarely is the poet a philosopher, or the philosopher a poet. Most poets have, like Goethe, been shy of philosophy; most philosophers have avoided the presentation of their ideas in poetic form. But Dante presents the unique type of a poet who embodies in one work the substance of the whole philosophy of his time, and of a philosopher who is able to give to abstractions the fresh palpitating life of poetry. Nor is this all: for not only is the *Divina Commedia* at once a poem and a philosophy, but it embodies as well the substance of all the natural science and all the political science of the age. This no doubt makes the study of Dante a difficult and complex one. Most of us know tolerably some department of thought and have only a smattering of other departments. The scientific man, throwing his energies into the study of one aspect of the great All, is apt to find, like Darwin, that even Shakespeare is for him unreadable. The poet is not usually fond of the abstract reflection of philosophical speculation; and the political theorist is apt to neglect enquiries into the foundations of society in his eagerness to solve some pressing practical problem. Dante, on the other hand, seems to have an equal interest in all branches of human thought, and we might call his poem "divine" also in this sense, that no aspect of existence, no phase of the Divine Thought embodied in the universe, is passed over by him. To comprehend the *Divine Comedy* adequately we must therefore be prepared to give some consideration to these four points: (1) its view of the physical universe, (2) its theory of the State, (3) its Ethics, (4) its Theology. These are not its only aspects; indeed it may be thought that the most important of all has been passed over, for undoubtedly this great confession of the Middle Ages is above all a *poem*. But, while this is true, we are entitled to select those aspects of it which are germane to our own special object, and therefore we may leave to the historian of literature the appreciation of the value and form of Dante's work, or at least we can only deal with this side of it incidentally and cursorily. I hope, however, to be able to say something upon the peculiar form of the *Divine Comedy*, with its double or triple meanings and its employment of the grotesque. The form, as I hope to show, is not a "separable accident," but is bound up with

the character and substance of the thought. There is another aspect also of Dante's work which can only be dealt with slightly. The *Divine Comedy* is a spiritual autobiography of the man Dante, containing perpetual allusions to incidents in his life, and revealing what manner of man he was. It would be a most interesting enquiry, though one beset with no little difficulty, to seek for a reconstruction from his own words of Dante's earthly life and mental history; but such an enquiry would take us too far away from our purpose, and besides it has already been treated in a satisfactory way by writers to whom reference will immediately be made. The lectures will therefore be limited mainly to the four topics mentioned above, i.e., to Dante's views of Nature, Human Society, Morality and Religion.

The lectures on these topics will form only part of the work, and in some ways the least important part. Twenty years' experience as a teacher have thoroughly convinced me that general statements about an author who has not been read by the student are of very little value. Education consists in living over again for oneself the experience of the race, and the main function of a teacher is to direct his pupil to the source of the most significant ideas, and to remove from his way the various obstructions which prevent his mind from putting forth its own inherent energy. In expounding the philosophy of Mill and Kant, for example, I am in the habit of beginning in each case with the *ipsissima verba* of the writer, which are found to have a suggestiveness and power of stimulating thought that no second-hand statement of their doctrines can ever have. If we may employ a much-abused term, this is the true "inductive" method in the study of philosophy. The same method it is proposed to apply in the present case, and therefore it is expected that those who propose to attend the present course of lectures will read and reflect upon Dante's two main works, the *De Monarchia* and the *Divina Commedia*. It is always advisable to read an author in the language in which he writes, but as it is too much to expect this of every one, I would suggest as the best substitutes, Church's beautiful translation of the *De Monarchia* (Macmillan & Co.) and the well-known and perhaps on the whole the best translation of the *Divina Commedia* by Cary, which is accessible to every one. Those who read Italian will find in Scartazzini's edition, with its copious commen-

tary, all that they require. Dr. Carlyle's prose translation of the *Inferno*, with the Italian text and notes (Bell & Sons, London, or Macmillan & Co., New York) will be found a suggestive book. There is also a more recent book on the same plan, containing the whole of the *Divine Comedy*, by A. J. Butler (Macmillan & Co.). The translation of Longfellow does not seem to me very good, but its copious notes and illustrative documents will be found valuable. On the whole, however, if one has to limit himself to the smallest number of books, I should recommend Church's *De Monarchia* and Cary's *Vision*.

It is of course impossible to understand Dante without a fair acquaintance with his life and times. There are several books which supply this need more or less adequately. For one who reads German none compares to my mind with Wegele's *Dante Alighieri's Leben und Werke*. English readers will find the late Dean Church's essay on Dante (*Dante and other Essays*: Macmillan & Co.), or Lowell's essay (*Among my Books*, second series: Houghton, Mifflin & Co., Boston) the most valuable; or they may consult Scartazzini's *Dante Handbook*, translated by Thomas Davidson (Ginn & Co., Boston), or Mrs. Oliphant's *Dante*, in her *Makers of Florence* (Macmillan & Co.).

Last year several members of the Theological Alumni Association gave in papers on a particular topic suggested beforehand. This is one of the most important parts of the work, which should not be neglected. The following subjects for essays are suggested, along with a few hints as to the sources of material:

1.—DANTE'S VIEW OF NATURE.

(a) The Cosmology of Dante may be learned by reading in succession the following passages of the *Divine Comedy*: *Inferno*, xxxiv, lines 106-126; xxvi, 90-142; *Paradiso*, xxiii, 112; xxvii, 106-120; xxv, 38; ii, 127; vii, 74; xxviii, 16-97; viii, 37.

(b) Dante's way of regarding the phenomena of nature may be seen from a consideration of the passages on light, etc., cited in Dean Church's essay. Ruskin's chapter on Medieval Landscape in his *Modern Painters* (Part IV, Chapter 13) is invaluable.

2.—DANTE'S POLITICAL THEORY.

This is fully expounded by Dante himself in the *De Monarchia*. The following passages from the *Divine Comedy* should also be

carefully read : *Paradiso*, xxvi, 139 ; *Purgatorio*, xvi, 103 ; *Par.* xxvii, 139 ; *Purg.* xvi, 106 ; *Par.* viii, 115.

It will be well to read also chapter vii, on the Theory of the Medieval Empire, in Bryce's *Holy Roman Empire* (Macmillan & Co.).

3.—DANTE'S CONCEPTION OF EVIL.

This must be gathered from the whole of the *Inferno*.

A suggestive discussion of the topic will be found in Symonds' *Introduction to the Study of Dante* (A. & C. Black, London), Edward Caird's essay on Dante in his *Essays on Literature and Philosophy* (Macmillan & Co), and W. T. Harris' paper on *The Spiritual Sense of Dante's "Divina Commedia"* in the *Journal of Speculative Philosophy* for October, 1887, (Appleton & Co., New York).

4.—DANTE'S CONCEPTION OF PURIFICATION.

The proper treatment of this topic will imply a careful study of the *Purgatorio*. The books and essays just referred to will be found valuable.

5.—DANTE'S CONCEPTION OF THE HIGHER LIFE.

This will involve an examination of the *Paradiso*. Same aids as before.

6.—DANTE'S THEOLOGY.

It is impossible to do more here in the way of suggestion than to say that Dante's Theology is implied all through the *Divine Comedy*, but is most explicit in the *Paradiso*. Besides the works referred to above, the notes in Longfellow's edition supply valuable material.

JOHN WATSON.

All things are noisome when a man deserts his own true self.

I wish to miss my mark as acting well, rather than to prevail, acting evilly.

Only in God's garden men may reap true joy and blessing.

Come, blowing softly, Sleep that knowest not pain,

Sleep, ignorant of grief,

Come gently, gently, kingly Sleep, and bless.

—*Sophocles*.

POSTAL REFORM.

THE most striking fact which the report of the Postmaster-General for 1892 reveals, is the immense deficit in the Post Office accounts. The net revenue for that year was \$2,652,000, but it required an additional sum of over one and a half million dollars to meet the expenditure. The net revenue did not, in fact, amount to two-thirds of the expenditure of the Department. The Post Office has for years been in a chronic state of what might be termed departmental insolvency. Can this condition of affairs be remedied? In the Department of Railways it has been this year demonstrated that by a bold stroke in management huge annual deficits can be nearly wiped out, without, we will hope, any detriment to the effective working of the Government railways or to the condition of their permanent way. Is there not room for an equally bold stroke on the part of the Post Office management? This department of the Government service ought, on business principles, be made to show a surplus.

In investigating the causes which have given rise to the deficiency, we are at the outset met with two facts—the one that huge masses of mail matter, including newspapers and periodicals, are carried either free or at a merely nominal rate, although involving an outlay to a very large sum to railways and other carriers employed by the Post Office; and the other, that the money order branch is practically unremunerative.

Whilst the public interest is served by cheap postage, it is only apparently served if the Department is thereby carried on at a loss, since this loss has to be made up by additional tariff or other imposts. In the case of newspapers and periodicals, there is no reason why they should be carried free. There is a service performed to both the publisher and the public, and that service should be paid for. If the Government sees the propriety of a duty on books where no service by it is involved, surely it is entitled to a return for the carriage of the newspapers, especially

when that carriage involves a very heavy actual outlay by it. In the one case, there is a tax on education ; in the other, a business return for a service performed. The old rate of one cent on each newspaper would perhaps be unreasonable, especially in the case of the large evening dailies published at one cent, but some fee which would more than cover the Government's outlay for transmission should be adopted. This fee would, for the convenience of collection, require to be prepaid, but it would, in most cases, reappear in whole or part in the price of the paper or periodical. Thus it is not the publisher who would have in this matter to be consulted so much as the public, and the public should not object so long as the aim is to reimburse to the Government the cost of receiving, transmission and delivery.

For twenty-one years previous to 1889, the date of the last complete returns, the average profit on each money order was only four-fifths of a cent, and, in fact, since 1882, this branch of the service has been carried on at a loss. In seeking for a reason for this, we find that whilst in 1872 the average amount of each money order was \$38, it had fallen in 1882 to \$22, and in 1892 to \$14. The obvious conclusion is that a vast mass of the money orders now purchased bring in a revenue of only two or five cents each, and that the average revenue is considerably under ten cents. For the labour involved in connection with the making out, transmission and ultimate payment of these orders, this is clearly too small a charge. Here then is a pressing reason for either raising the fee on the sums under twenty dollars, or the adoption of the postal order, which at a minimum trouble to all parties, would largely replace the smaller money orders, or the expansion of the registration system by including insurance.

Changes in our present system which might reduce the revenue would be open to objection, but those which would afford further facilities to the public, and be a considerable source of revenue without correspondingly increasing the expenditure, should meet with favour. And if some of these changes have passed the domain of experiment, and have been successfully adopted under the Imperial or the United States systems, there should be the more readiness to introduce them here. It is under these considerations that some new features in our system suggest themselves, and will be now referred to.

Postal orders form a ready means of transmitting very small sums by post and are in large use both in Great Britain and the United States. They are in form like bank bills, are in convenient amounts from 25c. to \$5, and cost from one cent upwards, according to amount. A blank is left for the payee's name, but in other respects, they are ready for use at any moment, and are paid out like bank bills, thus not entailing the loss of time to postal clerks, which the present money order does in drawing out and transmitting it, and often in paying it—a loss of time the purchaser and receiver would equally save. The advantage to the Post Office would, however, not stop here, for a relatively more remunerative scale of charges would have to be arranged for the postal orders than is adopted under the present money order system for small sums. When it is remembered that fifteen cents, and in many cases twenty-five cents, is the minimum charge made by the banks on country cheques, however small, the Department cannot apprehend difficulty in demanding a fair advance on its present scale for small sums. These postal orders should be sold to postmasters just as postage stamps are, and to prevent any possibility of alteration, the limit of any order might be made five dollars, and the amount of each order should appear more than once on its face.

It will be generally admitted that the Post Office might be made a more useful medium than it now is for the transmission of parcels, not only to the convenience of the public, but to the profit of the Department itself. The present charge on closed parcels is so high as to suggest the idea of an intentionally prohibitory rate. In Great Britain both the Post Office and the railways offer exceedingly reasonable rates, with the result that apart from the general public, the great retail houses of London, Liverpool, Belfast and other centres, and their customers all over the United Kingdom, make the most extensive use of the parcel system. The railways have a regular tariff graduated according to weight and distance, but the Post Office charges a general rate for all points within the Kingdom of six cents for the first pound weight and three cents for each pound thereafter. To illustrate the expense under our parcel system as compared with others, a 3 lb. parcel sent 200 miles would cost by English parcel post 12 cents, by English railway delivery, 14 cents, and by Canadian

Express Company, 25 cents, and in each case in the cities and towns, would be delivered at the receiver's door, whilst by Canadian parcel post, it would cost 72 cents, and the receiver probably be asked, after a day's delay, to call for it at the post office. In at least the larger Canadian cities, where the great bulk of the parcel business would be done, delivery by post office van might be readily undertaken.

An improvement has just been made in the size of the postal cards, but it is worthy of consideration whether, within certain limits of size, any card with the address confined to one side, and with a one cent stamp upon it, should not be permitted to pass through the post.

The recent further extension in Great Britain of the system of compensation for loss of registered letters, reopens the subject here. Our Canadian system is very anomalous. The fee is higher than in Great Britain, but the only security the sender has, besides his receipt, is that if the letter arrives at its destination, a receipt will be taken from the party to whom it is delivered. The Government assumes no liability whatever in case of loss, but is presumed to make some effort to trace missing letters. The increase in the fee, three years ago, from two cents to five cents, has considerably decreased the number of registered letters, showing that a large section of the public does not consider that the protection afforded warrants the larger fee now charged. In 1890, the limit of compensation given by the British Post Office for loss or damage to inland registered packets was \$50; in 1892, this was increased to \$125; and in 1893 to \$250—the maximum liability on each letter being fixed by the fee paid in accordance with a regular scale, commencing with the ordinary registration fee, which itself covers an insurance up to \$25. Every registered letter there is thus insured to at least \$25.

Now, what would our Canadian Government gain, and what risk of loss might it incur under the insurance system? A summary of the Post Office business for the past four years gives the following results:

Total registered letters	13,507,000
Affording, if at 5 cents each, a revenue of ...	\$675,350
The missing registered letters were	694
Of which there were not recovered	401
Which were alleged to contain.....	\$23,366

But this total loss included two remittances from banks, amounting to \$11,000, of their own bills which were burned in a postal car and were therefore not an actual loss to the banks concerned. These results make clear two facts—the large revenue obtainable from registration, and, the comparatively small risk of loss the Government would sustain by adopting the system of compensation. Another fact is, however, equally clear. The revenue would be largely increased by the adoption of the system as well as a great boon conferred on the public. If the ordinary registration fee insured as in Britain every letter up to \$25, not many letters containing money or valuables would be sent, as they often now are, unregistered, and if, by paying a larger fee, increased compensation, according to a fixed scale, would be obtained in case of loss, a very large number of the letters now registered would bear an increased fee. In Great Britain the maximum fee is 22 cents, covering an insurance of \$250.

It has been said that the system will entail much additional labour in the Post Office. This is not the case. The system carries simplicity with it. The ordinary books for entering registered letters would merely have one more column showing the fee paid, and therefore the limit of compensation, and the present registration sheet would be stamped with the fee as well. The production of this receipt by the sender of the letter, its comparison with the entry book, and a short official form of claim filled up and properly sworn to by the sender, should be sufficient proof in the event of loss.

The marvellous promptitude and the frequency of collection and delivery in the great cities of Britain are hardly to be expected in our less populous centres, and yet our service might be much improved in these respects. The postmen should be carried by electric car or post office van to and from their starting points, and earlier delivery thus secured ; the people should be encouraged to provide letter slits in their doors in order that the postman may not be delayed at so very many houses waiting the answer to his knock ; and, as letter boxes are often found to be at inconvenient distances away, all letter carriers should be instructed, as they are in Ottawa, to receive letters, when asked, and to deliver them promptly at the post office on their return from each round. Further, as correspondence goes chiefly by

the night mails, and as in our country of long distances, posting letters in time for these mails generally saves twenty-four hours, the letter boxes should not only indicate the hours of collection but that collection which ensures transmission by the night mails.

The popular impression is that the Post Office exists for the convenience and advantage of the public, and within the limits of a balance sheet showing an equality of revenue and expenditure, this impression should be correct. There can be no apology needed for asking the Department to consider improvements which the ever-growing wants of the public seem to demand.

A. T. DRUMMOND.

EXTREMES OF TEMPERATURE.

IN this age we may consider ourselves pretty well acquainted with the properties of matter as manifested at ordinary temperature, through a range extending say from 70 degrees below zero Fahrenheit to 1800 above. But it is only since the beginning of this, the last, quarter of our century that investigations far beyond these limits have given to the scientific world glimpses of two conditions ;—that of matter devoid of molecular motion—so cold as to be incapable of undergoing chemical change ; and on the other hand, matter under conditions which transcend those of high temperatures as ordinarily obtained, the result being a further simplification of the chemical elements. To take the last first ;—the highest temperatures so far experimentally attained are those of the electric arc, and, lately, of the electric furnace. In the electric furnace temperatures exceeding 4000° Fahrenheit have been measured ; and, with the intense heat thus reached, platinum and iridium have been easily obtained in the liquid condition. In the search for unity in nature, the

chemical elements have been studied, to resolve them, if possible, into some one primal matter. Prout attempted to show that the atomic weights of all the elements were multiples of that of hydrogen, and advanced the hypothesis that the elements have been formed by some sort of atomic condensation from hydrogen. The marvellously accurate investigations of Stas disproved Prout's assumption with regard to atomic weights, and his hypothesis fell to the ground. Recent researches, beginning about 1870 with those of Newlands, Mendeleeff and Lothar Meyer, and continued eagerly by a large number of chemists and physicists, lead to the conclusion that the chemical elements form a unique *system* of material species related to each other in such a way that at least under terrestrial conditions transmutation of one species into another can hardly be considered possible. But the spectroscope has enabled us to learn much about matter as it manifests itself in the sun and the fixed stars. *The Chemistry of the Sun* is the significant title of Mr. Norman Lockyer's interesting volume on this subject. When it is considered that iron, nickel, copper and platinum exist as *gases* in the atmosphere of the sun, it must be concluded that solar temperatures are so far above terrestrial that they begin to transcend our very ideas of temperature. But there are stars which have been shown to be hotter than the sun. Some stars are dusky red, others are bright white. It is natural to suppose that the latter are hotter than the former, and there is independent evidence to support this idea. It is in the white stars, then, that we may look for conditions most favorable to simplicity in the constitution of matter. The spectroscope declares that the white stars contain the fewest species of matter, and that hydrogen predominates. Thus, Prout's hypothesis reappears. The progressive simplification of spectra from the sun to the hottest star may be due to a corresponding resolution of our chemical elements into simpler kinds of matter, hydrogen being the last stage observed. Working in another direction Mr. Crookes has reached his theory of *the genesis of the elements*, according to which they have been evolved from a primal matter, *protyle*, existing under such conditions of heat and electrical energy that by the rhythmical degradation of these, the elements were formed, as it were, by successive vibrations of a cosmic pendulum.

At the excessively high temperatures which reign in the sun and the stars, chemical attraction is to a greater extent than under terrestrial conditions overpowered by the increased molecular motion ; so that substances like hydrogen and oxygen exist together as elements, their combination into water being possible only at lower temperatures. It is more than likely that in the case of some stars the temperature is so high that no chemical combination is possible, and that in them matter exists only in the elementary condition. The modern theory of chemical change is based on the idea of motion of the minute particles of which it is believed all bodies are composed, A chemical change implies movements of the atoms constituting the molecules, so as to form new kinds of molecules. If the atoms are in a state of such violent motion that they are unable to cohere into molecules, then chemical combination becomes impossible. But chemical activity may be impossible from an exactly opposite cause, the *absence* of molecular and atomic motion. This leads to a short notice of the remarkable results lately obtained in producing very low temperatures,—a much more difficult thing to do than the production of high temperatures. The difficulty is inherent. It is easier to convert other forms of energy into heat than the reverse. *Facilis descensus*, etc. It is now some fifteen years since Pictet and Cailletet succeeded in condensing the so-called permanent gases. Since then, the production of low temperatures for the condensation of gases has received a great deal of attention. Wroblewski and other Russian chemists have succeeded in liquefying oxygen, nitrogen, and other gases, in considerable quantities and testing the properties of the liquids. The low temperatures necessary for this work were obtained by condensing in large quantities such gases as carbon dioxide, and then allowing them to evaporate rapidly. At the temperatures thus reached, other more difficultly condensible gases were reduced by pressure to the liquid state, and in their turn rapidly evaporated. In this way still lower temperatures were reached. The lowest temperature so far measured (these measurements are only approximate) are in the neighborhood of -380° Fahrenheit. The contrast between these and the high temperatures under discussion is not surprising when we recall the modern theory of heat. As temperature is a function of molecular motion, it is plain that

when that motion ceases in any body, that body has no heat, it is absolutely cold. It is probable that even for the most subtle kinds of matter, such as hydrogen, molecular motion ceases at a few hundred degrees below the ordinary temperatures which prevail upon the earth. Professor Dewar has lately investigated the properties of matter at these low temperatures. He has obtained liquid air and liquid oxygen by the pint. The latter is a bluish liquid which jumps to the magnet like so much iron. It boils at about -300° Fahrenheit. In maintaining these low temperatures Professor Dewar found that ordinary non-conducting materials were of no avail. A vacuum was found to be the best insulator for heat; and a globule of oxygen can be kept liquid for some time by maintaining a vacuum around it. This suggests a revision of the calculations of the sun's rate of cooling. Interplanetary space is practically vacuous, as shown by the absence of friction effects on the planets. If heat does not readily pass across a vacuum, then what has been measured as the sun's heat does not represent the total radiation of a hot body as it would radiate in air. The longer waves, non-luminous to our vision, leave the sun in smaller proportion. The sun has a greater store of heat than its radiation indicates. It must be concluded, then, that the sun is not cooling so fast as calculated. It is an interesting idea. The great luminaries of the universe are suspended in a vacuum, and, while freely radiating light, lose very slowly the less refrangible heat rays. But, to chemists, the most interesting result of these low-temperature researches is that chemical change ceases as substances approach the absolute zero of temperature (-460° F). Sulphuric acid and caustic soda lie quietly in contact with each other, and show no signs of the tremendous power of their chemism as manifested at higher temperatures. In Professor Dewar's wonderful frost-tank, matter is chemically dead:

W. L. GOODWIN.

WINCKELMANN AND GREEK ART.

PREFATORY NOTE.

WE give below some extracts from Winckelmann's essay on Greek Painting and Sculpture, which may be interesting to our readers, especially if they are read in connection with Bosanquet's valuable work on the *History of Æsthetic*, and Pater's suggestive essay on Winckelmann in his *Renaissance*. So far as we are aware this is the first time that any part of Winckelmann has been translated into English. The fame of Winckelmann (1717-68) now survives, even among his own countrymen, rather as a tradition than as the product of direct study of his writings. In his own day he was regarded with admiration and almost with reverence by men like Lessing and Goethe, and when he was treacherously murdered by a traveller, whom in childlike simplicity he had taken into his confidence, his death was regarded as a national calamity. The secret of Winckelmann's influence upon his contemporaries lay in the fact that he recalled them from the abstractions of a lifeless orthodoxy, the dead commonplace philosophy of Wolff, and the inanities of pseudo-classical art, and taught them to come face to face with the fresh life and thought of Greece as embodied in its art. Winckelmann, says Hegel, is "one of those who, in the sphere of art, have known how to supply the human mind with a new organ." Goethe is equally enthusiastic: the works of Winckelmann, he says, are "a living thing written for the living: they are themselves a life." Mr. Bosanquet felicitously remarks that, as Bacon taught us to come directly into the presence of nature, setting aside all the *idola* which hide her real lineaments from us, so Winckelmann was the first to bring us really into contact with the spirit of Greece. In him we have the beginning of that sympathetic appreciation of the past which has so greatly widened our intellectual horizon, and has made us feel our kinship with the race in a fresh and vivid way never experienced before.

J. W.

EXTRACTS FROM WINCKELMANN.

The sense of beauty is spreading more and more throughout the world, but it first began to develop under the skies of Greece. The creations of other peoples were but germs, which changed their nature and form when they were transplanted to Greece,—that land which, as has been said, Minerva chose for its mild climate as the fit home of wisdom and refinement.

The taste which the Greeks displayed in their works of art has remained peculiar to themselves. Seldom has it gone far from Greece without loss, while in remote countries it was late in becoming known. It had certainly not found its way into the North at a time when the two arts, of which the Greeks are the great teachers, found few admirers; at a time when the finest paintings of Correggio were used to cover up the windows of the royal stables in Stockholm.

The only way for us to become great, and even inimitable, if such a thing be possible, is to imitate the Ancients; and what has been said of Homer, that to understand is to admire him, is applicable as well to the artistic products of the Ancients, especially of the Greeks. We must be as familiar with them as with our friends, if we are to find the Laocoon as inimitable as Homer. When we have become really intimate with them, our aesthetic judgments will be like that of Nicomachus on Zeuxis' Helen: "Take my eyes," said he to an ignorant critic, who was disposed to find fault with the picture, "and she will seem to you a goddess."

With such eyes Michel Angelo, Raphael and Poussin contemplated the works of the Ancients. They acquired their sense of beauty at its fountain-head—Raphael in the very country where it was developed.

A statue by an ancient Roman artist will always compare with a Greek original as Vergil's Dido does with Homer's Nausicaa, which the former tried to imitate.

Connoisseurs and imitators of Greek works find in the masterpieces of Greek artists, not only nature in her most beautiful form, but more than nature, i.e., certain ideal beauties, which are formed from images existing only in the mind.

The most beautiful human form among us would perhaps be

no more like the most beautiful Greek form than Iphicles was like his brother Hercules. The influence of a mild climate and clear sky made itself felt during the early development of the Greeks, but the physical exercises to which their early youth was devoted, gave this development its noble form.

The great games were a powerful incentive to physical exercises with all young Greeks. The laws required ten months' training for the Olympian games, and that in Elis on the very spot where they were held. It was not always men who won the best prizes, but oftener youths, as is seen from Pindar's odes. To resemble the god-like Diagoras was the highest ideal of a Greek youth.

The body acquired from these exercises the large and manly outline, without any superfluous fulness, which the Greek masters gave their statues.

The school of the artists was in the gymnasia. The philosopher, the artist, went thither; Socrates to teach Charmides Autolycus and Lysis; a Phidias to enrich his art by observing the beautiful forms of these youths. There he learnt the various movements of the muscles and flexions of the body. The outlines of the body or its contour were studied from the impression which the youthful wrestlers left in the sand.

These frequent opportunities for the observation of nature caused the Greek artists to go still further. They began to form certain general notions of beauty, both of single parts of the body and of the relation of these parts to one another, which should be superior to nature herself. Their original was an ideal creation existing only in the mind.

In this way Raphael formed his Galatea, as is shown by his letter to Count Balthasar Castiglione: "Since beauty," he writes, "is so rare among women, I use a certain idea of my own creation."

The Greeks formed gods and men according to conceptions superior to the ordinary material form. In gods and goddesses the brow and nose formed almost a straight line. The heads of famous women on Grecian coins have a like profile, although in this case the artist was not obliged to work according to purely ideal types.

But the rule "to make the figures life-like, and at the same

time more beautiful," was always the highest law which the Greek artists recognized ; and it necessarily presupposed the master's intention to make the natural form more beautiful and more perfect. This rule Polygnotus invariably followed.

Accordingly, when some artists assert that they do like Praxiteles, who formed his Cneidian Venus from his wife Cratina, or like other painters, who took Lais as the model for their Graces, I should answer that the Greek artist did so without deviating from the great general principles of art enunciated above. Nature supplied the artist with the sensuous beauty ; his ideal sense of the beautiful with the sublime features. From the former he took the human part of his work, from the latter the divine.

The imitation of the beautiful in nature is either directed to a single object, or it collects the good points of several into one whole. The former is called making a copy, a portrait : it is the way to Dutch forms and figures ; but the latter is the way to the universally beautiful, and its idealised representations. This is the path followed by the Greeks. They differ, however, from us, in this, that though they might not have more beautiful forms directly before them, they had a daily opportunity for observing the beautiful in nature, which does not always offer itself to us, and then seldom as the artist desires it.

Our country will scarcely produce as perfect a form as that of the Antinous Admirandus, and the mind can conceive of nothing higher than the divine proportions of the Vatican Apollo. All that nature, intelligence, and art were able to produce, here lies before our eyes.

I believe that by imitating these works, we might all the sooner gain proficiency in art, for we find in the one the essence of that which is scattered throughout nature, and in the other we see how far the most beautiful products of nature may be surpassed by an artist at once bold and self-restrained. We shall learn precision in conception and drawing by seeing the highest limits of human and of divine beauty here prescribed for us.

The conceptions of totality, of perfection in nature, as seen by the Ancients, will render clearer to the artist the conceptions of the partial in nature as seen by us. When he discovers the beauties of the latter, he will know how to combine them with

the absolutely beautiful; and with the help of the lofty forms ever present to him, he will become a law to himself.

Even if the imitation of nature could supply the artist with everything else, correctness of contour can certainly never be reached in this way: it can be learnt only from the Greeks.

The noblest contour combines or comprises the most beautiful parts supplied by nature, together with the ideal beauty of Greek figures, or it is rather the highest conception in both.

The line which separates a properly rounded form from one of too great fulness is very fine, and the greatest modern masters have gone too far on both sides of this sometimes imperceptible boundary. He who would avoid a pinched contour, went to the other extreme, and *vice versa*.

Of Michel Angelo alone it might be said that he equalled the Ancients, and this only in strong muscular figures, in forms from the heroic age; but not in tender, youthful forms, not in female figures, which under his hand became Amazons.

Even under the drapery of the Grecian figures, the masterly contour is prominent as the main idea of the artist, who, even in the marble, reveals the beautiful structure of the body as through a Coan robe.

By the word "drapery" is meant all that art teaches about the robing of figures and the folds these robes are made to take. Skill in this branch of art, next to natural beauty and noble outline, is the third distinguishing quality in the works of the Ancients.

The drapery of the Vestals (in the Dresden gallery) is of the highest order. The little folds flow softly out of the garment and lose themselves in it again, with a noble freedom and gentle harmony of the whole, yet without concealing the beautiful form of the body.

But this justice must be done some of the great artists, and especially some of the great painters of modern times, that in certain cases in draping their figures they have deviated from the method most usually followed by the Greek masters, without doing violence to nature and truth.

The general and distinctive mark of Grecian master-pieces is a noble simplicity and a calm greatness both in posture and in expression. As the depths of the sea remain always in repose,

however the surface may rage, so does the expression of the Greek statues show, in the midst of all their passions, a great and composed soul. This soul is revealed in the face of Laocoon, and not merely in the face, in the midst of the most intense suffering. The pain which is visible in all the muscles and sinews of his body, and which we can almost imagine that we feel ourselves, even without observing the face and other parts, simply from the painful contraction of the lower part of the body; this pain, I say, is, nevertheless, expressed without violence in the face and posture. He utters no terrible cry, as Vergil says of his Laocoon. The opening of the mouth does not permit it. It is rather a smothered sob of anguish, as Sadolet describes it. Pain of body and greatness of soul are divided and, as it were, equally distributed through the whole figure. Laocoon suffers, but he suffers like the Philoctetes of Sophocles. His anguish affects us profoundly, but we would fain have the power of bearing anguish as this great man does.

The expression of so great a soul far surpasses the most beautiful form in nature. The artist must have felt in himself the strength of mind which he imprinted upon his marble. Greece had artists and philosophers in one person and more than one Metrodorus. Philosophy lent Art a helping hand and animated her figures with no common souls.

The more repose there is in the posture of the body, the better adapted it is for depicting the true character of the soul. In all positions which deviate too much from that of repose, the soul is in an unnatural and strained condition. The soul is more vividly expressed in violent passions, but it is great and noble only in the state of unity, in the state of repose. In the Laocoon pain depicted alone would have been *Parenthyrsus*; therefore, the artist, in order to combine nobility of soul with that which was characteristic, gave to the main figure an action which came as near to the state of repose as was compatible with such extreme pain. But in this repose the soul must be characterised by traits peculiar to itself, in order to represent it as calm and yet energetic, quiet but not indifferent or sleepy.

The fine arts have their youth as well as men, and the beginning of these arts appears to have been like that of artists, who at first take pleasure only in the striking and the surprising. The

tragic muse of Æschylus took this form, and his *Agamemnon*, partly from its hyperbole, is much more obscure than anything which Heraklitus wrote. Perhaps the first Greek painters drew as the first great writer of tragedy sang.

The noble simplicity and calm greatness of the Greek statues is also the real superiority of the Greek writings of the best period, the writings of the Socratic school. It is those qualities, too, that make the pre-eminent greatness of a Raphael, and this greatness he attained by following the Ancients.

J. M.

ANIMAL BIOLOGY.

FORTY years ago, "Natural Science" included the separate science of physics, chemistry, mineralogy, botany, zoology and geology, in short, all the sciences which treated of the phenomena of nature. Twenty years ago, the phrase as used in our calendar included the last five of these sciences; and for the past ten years, it has been narrowed down to include botany, zoology and geology. The reason for these changes has been the immense increase in the subject matter of the sciences, the division of university chairs, and the appointment of additional professors to teach subjects that were formerly included in the work of one man. To-day the phrase bids fair to become expunged from the calendar. The division of Prof. Fowler's chair last year, and the appointment of a professor of animal biology, renders it necessary to drop the phrase altogether or to narrow its meaning still farther. But why not use the old term zoology instead of Animal Biology. Do the two words mean the same thing? In answer it may be said that some writers, disregarding the history

and development of the sciences, use the term biology as if it were exactly synonymous with the two sciences, botany and zoology. Others, and we think more careful writers, use these names as something more than mere sub-divisions of general biology. Biology is the science which treats of the nature and origin, the continuance and progress of life, whether that life is found in animals or plants. It is the philosophical aspect of both botany and zoology. Its study pre-supposes some knowledge of the natural history, structure, physiology and distribution of both animals and plants. It is the study of the advanced student rather than of the beginner. The generalizations of science are always based upon the widest possible knowledge of its facts, and biology which furnishes us with generalizations based upon the facts of animal and plant life, comes in naturally only after the student has acquired as much information as possible about the every day lives of animals and plants, their anatomy, physiology and relationships.

The difference in meaning assigned to the term biology by different writers is very well brought out from a study of the two following tables. The larger one is taken from Sedgewick and Wilson's *General Biology*, and the smaller one from J. Arthur Thomson's *Study of Animal Life*:

Study of the real life of	<p>"Natural History."</p> <p>{ fauna class order genus species families pairs individuals }</p>	in relation to one another and to their surroundings	<p>"Biology"</p> <p>Generalizations as to the nature and origin, continuance and progress of life.</p>
	<p>5. Organisms. 4. Organs. 3. Tissues. 2. Cells. 1. Protoplasm.</p> <p>Study of structure (Morphological) | Study of function (Physiological)</p> <p>"Zoology."</p>		

Biology. The science of living things ; i. e., of matter in the living state.	Morphology. The science of form, structure, etc. Essentially statical.	Anatomy. The science of structure ; the term being usually applied to the coarser and more obvious composition of plants or animals.	Botany. The science of vegetal living matter or plants.
	Physiology. The science of action or function. Essentially dynamical.	Histology. Microscopical anatomy. The ultimate optical analysis of structure by the aid of the microscope ; separated from anatomy only as a matter of convenience.	
		Taxonomy. The classification of living things, based chiefly on phenomena of structure.	
		Distribution. Considers the position of living things in space and time ; their distribution over the present face of the earth ; and their distribution and succession at former periods, as displayed in fossil remains.	
		Embryology. The science of development from the germ ; includes many mixed problems pertaining both to morphology and physiology. At present largely morphological.	
Biology. The science of living things ; i. e., of matter in the living state.		Physiology. The special science of the functions of the individual in health and in disease ; hence including Pathology.	
		Psychology. The science of mental phenomena.	
		Sociology. The science of social life, i. e., the life of communities, whether of men or of lower animals.	
Zoology. The science of animal living matter or animals.			

The phrase, natural history, in its widest sense means much the same thing as natural science, but in the above table it bears a narrower and more precise meaning. It includes that aspect of

the study of animals in which the every day lives of animals are observed—their habits, their industries, their loves, their hatreds, their mating, their migrations, their struggles. Obviously, the natural history of animals and plants can be best studied only in field, forest, stream and sea. The field naturalist must do all his work outdoors. He must peer into ponds, peep into nests, overturn stones and boards, write down the compositions of birds, crickets and grasshoppers, in short, he must watch, wait and learn all his lessons from the animal kingdom, and not from books. It is quite otherwise with the zoologist. He has given himself up to analysis. At first in a rough and superficial way he analysed and classified. He noted outward resemblances and differences, and formed his classes, orders and species. The *Systema Naturæ* of Linnaeus was the direct outcome of this external study of animals, just as Hooker's *Flora* was the result of the systematic study of British plants. For a time classification ran mad. Every zoologist bent all his energies towards the discovery and determination of new species. Later on, the study took a new direction. Cuvier looked beneath the outward forms of animals, began to dissect and made a study of their organs. A few years afterwards, zoologists took a further step in their analysis and found that organs were made up of tissues, that tissues were composed of cells, and cells of protoplasm. Here for the present the analysis has stopped. Protoplasm defies analysis by either the chemist or the physiologist. *Pari passu* with the study of form, the zoologist has pursued the study of function. 'What are the powers of life' was a question he was always asking himself. What are the uses of these tissues and cells and protoplasm? Thus it will be seen that every zoologist was at first both an anatomist and a physiologist, and if in recent years the latter science has lagged behind in the race, it is because the zoologist has given himself up too exclusively to the study of form.

It will thus be seen that natural history, zoology and biology are but three different aspects of the study of animal life. Every observing man is something of a naturalist; fewer are zoologists; and still fewer are biologists. All three aspects, however, of the study are essential, and it is absurd to magnify one or belittle the other. We do not include in this condemnation the Rev. J. G. Wood's good natured laugh at the morphological zoologists when

he says: "Certain dreadfully scientific persons, who call themselves naturalists seem to consider zoology and comparative anatomy convertible terms. When they see a creature new to them, they are seized with a burning desire to cut it up, to analyse it, to get it under the microscope, to publish a learned book about it which no one can read without an expensive Greek lexicon, and to put up its remains in cells and bottles. They delight in an abnormal hæmapophesis; they pin their faith on a pterygoid process; they stake their reputation on the number of tubercles on a second molar tooth; and they quarrel with each other about a notch upon the basisphenoid bone." We are all inclined to laugh at a specialist who has lost his bearings. He is like a mole, who thinks his little burrow is the world. The specialist in comparative anatomy, physiology or cytology is apt to view animal life terribly awry, and to think that the view which he takes of it is the only thing for mankind to know.

From the very nature of the study a biologist cannot be a specialist. His work is to take a general survey of the phenomena of life, to arrange them, to unify them, and to reach general conclusions. A naturalist becomes a specialist by limiting his observations and studies to some small genus or species, a zoologist specializes by studying the tubercles on a second molar tooth or some other such bewildering investigation; but a biologist cannot limit the range of his observations in any such way. His sweep of view is like that of a Newton in physics, a Lyell in geology, or a Mendeleeff in chemistry. His work is to view the facts of life in proper perspective; to show that they possess a sequence as orderly and immutable as the facts of physics and chemistry; to shew that the infinite wealth and variety of life are not inconsistent with perfect simplicity and symmetry; in short, his work is to relate the phenomena of life to one another and to the rest of human knowledge. It is the biological aspect of life which will in future be most emphasized in the arts course at Queen's, not merely because it is the philosophical one, but because it is the one which best lends itself to the purposes of a liberal education.

A. P. KNIGHT.

A GREEK TRAGEDY.

I.—THE THEATRE.

RECENT researches and excavations have enabled us to attain a fairly complete conception of the circumstances attending the production of the Greek Plays. In the following pages, an attempt will be made to present in popular form, briefly and without entering into the discussion of controverted points, a picture of that curious and characteristic pageant so dear to the Athenian heart, and so influential in forming the national character.

Let us suppose ourselves transported through time and space to Athens in April 441 B.C. We find in this fairest city of the world many things well worth seeing. Already the Queen of the Aegean, ruler of the waves, whose sway to use the expression of her greatest statesman, is undisputed over one of the two elements open to activity of man, is adorned in her royal robes, and is no less queenly to the eye than in the substance of her power. But for the present we must forbear to visit her fair temples and painted porticoes. We must confine ourselves to her Theatre where we intend to be present at the performance of one of those famous plays of which all the world has heard.

We have arrived at the gayest season of the year. The whole city keeps holiday for five days in honour of Dionysus—the genial wine, God-giver of release from care, giver of the vine that beautiful and delicate plant of wondrous virtue, the culture of which marks the final step in the advance of mankind to settled homesteads and civilized life. There are great doings in the town in many various ways. It is crowded with strangers from all parts of Greece; for the stormy season is over and the sea is open once more; the Peiræus is full of ships wafter thither by all the winds. Business and pleasure have attracted to the centre of the intellectual and commercial life of Hellas, not only great numbers from the innumerable islands and sea-coast towns which own the headship of Athens, but also crowds of other Greeks who throng to see the world-renowned Dionysiæ festival. Everyone is in the streets—men, women, children and slaves—enjoying themselves

in the pleasant spring sunshine. The very prisoners are set free during these days, and no one can be arrested for debt. The most perfect good humour and orderliness prevail among this crowd. All minds are attuned to the benign influences of the sacred season, to the sentiment of civic good-fellowship and common enjoyment. Any breach of the peace at this time is reckoned a capital offence.

Now it would be extremely interesting to see the numerous celebrations which are going on in honour of the God, more especially the splendid procession, said to be one of the wonders of the world. But we are concerned merely with that part of the pageant which forms its concluding and crowning feature—the representation of the new Tragedies for the festival. These have been composed by three poets chosen by the state—each competing against the others with three Tragedies and a comic after-piece called a Satyric drama, before the assembled people and judges appointed with the most elaborate precautions to exclude the possibility of corruption. These tragedies contain a lyrical element which is rendered by what is called the chorus. The chorus is carefully trained and provided with the most gorgeous dresses—the expenses of their maintenance, training, and adornment, being a compulsory burden imposed by the state on the wealthiest class of the citizens, who take it in turns. This is the part of the festival which we have come to see. Though on pleasure bent we have a frugal mind. It is better to see one thing thoroughly and intelligently than to ‘do’ a thousand in the usual superficial tourist fashion. So it will be advisable to forego the other sights, and spend our first afternoon in a preliminary visit to the theatre. Thus we shall get hold of some conceptions necessary or helpful to our understanding of to-morrow morning’s play.

We have obtained from the Archon, the magistrate in charge—since the Theatre and all that concerns the cult of Dionysus is an affair of state—permission to see the stage-buildings and properties. Quitting our inn therefore—Pandokeion they call it—the rather as it is a place which invites to the open air, we make for that conspicuous hill the Acropolis, which dominates the city with its exquisite piles of columned temples, crowned with the gleaming statue in ivory and gold of the virgin Goddess Pallas

Athene, guardian of the city. The theatre stands on the southern slope of that hill.

What a theatre it is ! It covers a hill-side, and is open to the blue sky. They say it can hold thirty thousand people. You see it is not a theatre at all in our sense of the word ; it is rather an enormous temple of Dionysus. It has to be large enough to contain the whole population of Athens, for their presence in a body is necessary to the full eclat of the God's honours. A fee is indeed charged for admission ; but it is incredibly small, and any citizen who is too poor to pay obtains it on application from the treasury. The theatre-going of the Athenians is like Christmas. It comes but once (or rather twice) a year, but when it does come there is enough of it to compensate for the rarity. They sit here from early morning till night-fall for three consecutive days hearing plays all the time without intervals for refreshments. That they bring with them together with copious supplies of sweet-meats to tide them over the duller parts of the performance.

Now let us look at the theatre. You see it divides itself naturally into three parts—the Auditorium where the people sit, the Orchestra for the chorus, behind and above that the stage with the solid stone buildings in the rear. Let us examine each of these parts for a moment or two. The Auditorium bounded and supported by that massive limestone wall consists as you see of an endless series of nearly semi-circular rows of stone seats, sloping upwards with the natural slope of the hill, and yonder in the north-east corner cut out of the living rock. Each seat is a separate stone chair ; those in the front rows beautifully and elaborately carved, deserve to be called thrones. The priests, magistrates and distinguished foreigners, guests of the Athenian people sit there. They must find them rather hard, you will say, to sit in all day long. But if you try one you will find it is as comfortable as stone can be made to be, and besides many bring cushions with them.

Now for the second part. That circular space of levelled ground in a line with the centre of the rows of seats, with an altar in the middle and a gutter to run off the rain (the building being open to the sky) is the Orchestra. The chorus occupy this space. They are practically the band who give us music between the acts, only they sing and dance to the accompaniment of a flute

instead of playing on instruments ; their song is vitally connected with the matter of the play, and they often take part in the dialogue, thus counting collectively as one of the personages of the piece. Among the many divergences of the Greek Drama from the type with which we are familiar, none is so striking and decisive as the part allotted here to this chorus. You see how they are placed so as to be the most conspicuous objects on which the eye of the spectator rests. You will find if you try that the orchestra is perfectly visible—which is more than can be said for the stage—from every point in the Auditorium, even from the extremities of these long arcs formed by the rows of seats. Now this prominent position of the chorus is a survival of an earlier state of things. Their song which is now rather an interlude—although an interlude organically interwoven with the structure of the piece—was once the kernel of the show. The dialogue on the stage, originally of the simplest character and carried on by a single actor with the leader of the chorus, served merely for explanatory parenthesis to fill in the breathing spaces in the song and dance of the latter. Gradually the relative positions have become reversed ; a second actor, then a third have been introduced ; the action of the drama developed in the dialogue on the stage has become the central interest ; the early essentially lyrical has developed into an essentially dramatic art. But from a spectacular point of view the chorus are still the central feature of the exhibition. Nor is this remarkable fact so anomalous even in a purely æsthetic light, as it might at first appear. It is not too much to say that the tragedy as a whole takes its peculiar colour from the chorus. To a large extent it is the lofty choral-song which determines the strikingly ideal tone of Athenian tragedy. The note of high religious enthusiasm, of lyrical fervour and exaltation struck in it, peremptorily excludes from the dialogue, of which it is the soul, all that is trivial and common.

The great expense of training and dressing the chorus which forms, as we have said, so prominent a feature in the spectacle falls, it will be remembered, on the richest class of the citizens who take it in turns, as they are called upon by the state. So important is the performance of this duty that the chorus-master associated with the victorious poet—it has already been mentioned that the keen interest of competition is added to the other excitements of

this show—is so definitely recognized as contributing an essential part to the victory, that his name is proclaimed along with the poet's, before the whole assembled people, when the time comes for pronouncing the judges' verdict on the plays.

It remains for us to consider the third part of the theatre, the stage. We have never seen one like this before. It is merely a long narrow platform at a great height above, and immediately behind the orchestra, with which it is connected by means of steps. It is not more than twelve feet deep. Evidently we cannot expect here those rich pictorial groups of masses of figures to which we are accustomed on our modern stages—such as Wagner has so effectively carried to a maximum in his marvellous operas. The actors must be comparatively few. As a matter of fact the poet has to content himself with three speaking actors, although these can be manipulated so as to take several different parts at various points in the progress of the action, and any number required of silent supernumeraries may be added. The actors must be few and they must stand practically in a line. That stone wall which rises behind the platform serves for attaching the painted scenes, which are of the simplest kind. A very small stock of them is sufficient. The scene is scarcely ever changed in the course of the piece; any change which does occur is indicated by the most trifling alterations, and the very same scenery often does duty for several pieces in succession. The stock scene is what we shall see to-morrow—in the centre the court-yard in front of a palace or temple marked for magnificent by its pillars and statues; to the right of the spectators a city indicated with some attention to perspective; to the left a country landscape with hills and woods. None of our paltry modern elaboration in scenic effect, or in pedantic attempts at archæological and local accuracy, is aimed at here. The Greek poets have much too fine a feeling for their art to overlay the proper interest of their plays by the prominence of such accessories.

We shall now avail ourselves of the Archon's pass into what we may call the Green-room, call up the caretaker and have a look at the dresses and properties used by the actors. We pass into the substantial stage buildings, well roofed against the weather, enter a large room and see all around disposed in orderly fashion the objects of which we are in search. Hanging on pegs

are many long splendidly coloured robes of fine and costly texture. The effect of these amply-sweeping vestments will be to give height and dignity to the figure. But what is this row of extraordinary and terrific objects lying there on the shelves? They are the tragic masks—the most peculiar part of the actor's equipment and the most foreign to our modern stage traditions. They are indeed a strange disguise for the human face divine. The mouths are wide open, the features gigantic, strongly marked and stern, the brow prolonged upwards to a portentous height, only the white of the eyes painted, great coarse hair and sometimes fierce bushy beards. It is then a drama of Brobdingnagians or the presentation of the life and adventures of Jack the Giant-Killer, which we have come so far to see? Look at these boots again, cothurni as they call them. They have soles a foot thick. Do the actors wear these too, and if so do they train for it before-hand in a long course of walking on stilts? The get up of these gentlemen must be of the most appalling character, enough to frighten the women and children into fits. Well, you must remember the vast size of the building. It is distance which lends enchantment to this view. The actor's figure to be imposing, nay, to escape being insignificant, must be made to look as tall as possible; the due proportions being retained by means of liberal padding. Hence his sweeping robes and high boots on which he must walk so deliberately and warily if he is not to come to grief; hence the prolongation of the forehead in the mask. The more important the character he represents the loftier must be his stature, for as there are no play bills, everything here is indicated to the eye. We must remember also that these tragedies have a religious purpose. The whole performance is a religious rite intended for edification like the Passion play at Ober-Ammergau. The subjects are taken from the sacred legends of the Greeks, which are to them what the stories of the Old Testament are to us; and the characters brought upon this stage are not the ordinary men and women of every day life, they are sublime beings elevated beyond the pitch of common mortality in their power to do and to suffer. Their whole appearance harmonizes with this, and though you may think the fixed and stony mask will make acting in our sense of the word impossible inasmuch as that depends above all on flexibility of facial expression, yet remember once more the size of this

building. Delicate play of feature subtly following and interpreting the shifting play of emotion, would be utterly lost here. A good mask, with the main lines of the character required, brought out in bold relief, is much the most effective thing possible under the present conditions.

We see then what we are to expect. We cannot have realism on this stage. The mirror cannot be held up to nature in the sense that we shall have anything resembling the scenes of every day life brought before us. Realism, mobility, illusion are foreign to the Greek Tragedian's conception of his religious art ; incompatible with the conditions of his theatre. He cannot give us back as Shakespear does the multiform swift-changing charm of the living and moving world with its laughter and tears in that bizarre juxtaposition which reality presents. He cannot like him seize the subtle play of individual character in its most evanescent tints, the feeling moods of varying emotion. His art is simple, statuesque, deals with types rather than with individual characters. What shall we see here to-morrow as we look down from these benches ? Something like this :—the chorus brilliantly dressed in the foreground ; the stately though slow moving and somewhat unwieldy figures of the actors in line on the narrow stage ; immediately behind, throwing these into relief, the background of the painted scene. Now this is not a picture with depth and distance, such as we know on the roomy stages of London and Bayreuth. The effect is rather statuesque. It is a brilliantly coloured frieze or bas-relief. Once for all we are among the plastic people of the world. All the products of their genius—the plays themselves as well as the setting of them, the speeches of their orators, the works of their historians, the very disquisitions of their philosophers, nay, the characters of their great men are of the plastic type ; simple, clear, articulated, severely symmetrical. Why it is in the very air they breathe ! You noticed how clear in this lucid and bracing atmosphere all distant objects looked as you walked though the streets. Endless vistas with the glamour of mysterious shade, yearning divinations of the infinite mystic chiaroscuro—those qualities of art and soul which Christianity and the dim humid northern forests have impressed upon a new order of development—of such things the Athenians do not dream. The indefinite, what cannot be reduced within clear

bounding lines, is the object of horror to them. As a perfect body is in their view the sufficient expression of a perfect soul, so in every region form and content must be mutually commensurate.

We may now go back to our Pandokeion and have a talk with old Pasias, our host. He is a metic, or foreign resident, who has lived in Athens the greater part of his life. As such he has no vote, but still he has caught the infection of his surroundings and takes a great interest in politics. He is a staunch Conservative and thinks the country has been steadily going to the dogs since Pericles came into power. The good man's political views are inspired by the comedies in which he takes the greatest delight. He loves the theatre for its own sake, as well as because it brings him a great deal of custom. He is always posted as to theatrical news—quite a walking Athenian Sporting and Dramatic Times—and now we learn from him that to-morrow morning the first play will probably be a tragedy by Sophocles, the son of Sophillus, called the *Antigone*. The data for his expectation were supplied a few days ago at the Odeum or Music Hall—a building near the theatre where the poets, chorus-masters and choruses for the year display themselves before the people, by way of foretaste and preliminary canter, a few days before the competition. The best thing we can do then before going to bed is to read up the Tragic History of the House of Labducus, familiar to all Athenians as the story of Abraham is, or ought to be, to us. With a part of this history the play is going to deal.

The fruit of our mythological studies is as follows: Oedipus, king of Thebes, whose terrible story we need not further look into at present has two sons Eteocles and Polynices. After their blind old father has been driven into exile, because his presence in Thebes is now regarded as a pollution, Eteocles and Polynices quarrel as to who shall reign in his stead. Eteocles, although the younger, at length possesses himself of the throne, and the elder brother is banished. He goes to Argos, marries the daughter of the king there, and uses the influence thus acquired to raise an army, at the head of which he marches against his native city to reinstate himself in his rights. Associated with him are six other leaders, who with himself are the celebrated seven that went up against Thebes—each against one of its seven gates. The Thebans under Eteocles, choose seven champions to defend their walls

against these seven. The assault is made and at every point the defenders are victorious. At one of the gates the two brothers meet in mortal combat and each falls by the other's hands. The throne of Thebes thus left vacant by the death of Eteocles passes to the male heir next of kin, who chances to be Creon the uncle of the slain brothers. Creon's first act of sovereignty is to mark his detestation of the crime of Polynices, who had turned his parricidal arms against his fatherland, by publishing a decree that while Eteocles who had fallen in defence of his native city should be buried with all honours, the corpse of Polynices should be left to the dogs and vultures. Now in order to put ourselves into the position of an Athenian audience we must realize with perfect distinctness what this decree of Creon's means to them. To a Greek there is something inexpressibly shocking in refusing interment to a dead body. A corpse belongs to the Gods of the underworld; to withhold it from them is to rob them of their due; to leave its ghastly presence in the light of heaven is to present an offence and abomination to the pure eyes of the celestial deities. Moreover such maltreatment is not only the infliction of a cruel shame on the dead man; it is also an act of substantial inhumanity to him. His fate in the next world depends decisively on whether he has received sepulture or not. Much the most terrible misfortune, as the pious Greek thinks, which can befall a man is that his body should lie unburied. Such fate means to him no less deep a horror than to the Mediæval Christian the thought of dying without having received the last rites of the Church and passing into eternity "unhouseled, disappointed, unanealed." The relations of a dead man cannot be conceived to have any more binding duty, any claim upon them more urgently enforced by piety to the Gods and love to the helpless dead, than this of bestowing the last offices upon his remains. We can understand then how the Athenians will feel as to this decree of Creon's. Although Polynices had been guilty of a terrible crime in making war upon his native land, to pursue him with vengeance even beyond the grave will seem to them an impious and barbarous act. Now we read that Polynices had two sisters surviving him, Antigone and Ismene. They live in the palace under the guardianship of their uncle Creon. It is their first duty, come of it what may, to set at naught their uncle's inhuman decree.

Having thus prepared ourselves we may now go to bed. To bed indeed but alas ! not to sleep. The greater part of the night has to be devoted to the too wearing excitement of the chase. We are not sorry when the morning breaks. Soon after we wend our way to the Theatre, towards which the whole town is already streaming. Arrived there we find the enormous building, even at this early hour, nearly full. There sit in lively conversation accompanied by the most animated gestures and speaking looks with crowns on their heads in honour of the God and bright holiday garments, which glisten in the rays of the morning sun, all the Athenians with their wives, children and even slaves, as well as a great concourse of strangers. The noise of the talk is like the sound of innumerable waters or a mighty rushing wind. It is an inexpressibly moving sight this endless swaying sounding sea of human faces arising curved billow on billow far as the eye can reach ; this large family of kindred men united in common enjoyment and common worship. To think that in a very few years not one of all this multitude shall rejoice in the mild spring sunshine any more for ever !

Taking our places we look down towards the stage. Everything is as it was yesterday with two exceptions. First a painted scene has been attached to the wall at the back of the stage. It represents a palace in the centre ; to the right a town ; to the left a rural landscape with trees, rocks, and mountains. Second in the centre of the orchestra we descry a stone figure which is new to us. It is the statue of Dionysus in whose honor this mighty celebration is held. The young men of Athens who have this year come of age for military service, the hope of their country, carried it hither last night in torchlight procession with dance and song. The God it seems looks on from his place in full view of the stage at the plays performed in his honour. He is the only spectator here who never fails to keep his place through all the changing years.

But now the stentorian voice of a herald proclaims silence. The business of the day is to begin. A victim is brought out by some attendants and sacrificed on the altar in the centre of the orchestra, near which stands the statue of the God. The meeting, like all great assemblies of Athens is opened with prayer. The ministrant is the splendidly robed priest of Dionysus, whose seat

is the magnificently sculptured throne in the centre of the first row. Next the long roll is called of the subject states which recognize the imperial sway of Athens; the tribute paid by them for the year is solemnly deposited on the Altar in the orchestra—a sight visibly stirring to the patriotic pride of the sovereign people. And now a number of young men march past in full panoply. They are the orphans of fathers slain in the City's wars. Athens has adopted them as peculiarly her children; has reared and educated them from her treasury. They are now of age; ripe for repaying the dues of nurture to their mother-city, which here looks down with pride upon them as they display before her eyes, the bloom of their youthful vigour. Next the herald from the stage-platform proclaims the crowns which have been decreed by Athens herself, or by foreign states, to Athenian citizens. Each name is greeted by a tumultuous burst of applause, a majestic sound for which thunder and Niagara are weak comparisons. And now after all these preliminary ceremonies which make us realize so vividly the thoroughly national character of this gathering, we have come to the special business in hand. A trumpet sounds; the crier calls upon Sophocles the son of Sophillus to lead in his chorus.

Pasias was right. We are not going to have to wait long to hear the words of the famous poet most beloved by his countrymen, "the mellow glory of the Attic stage." But he does not as we should expect from the herald's command appear in person. It seems the formula we have heard is a mere formula, a survival from the time when the chorus with its hymn was the most important features of the performance, and the poet himself took a leading part in the presentation of his composition. The response which actually follows, is to its spirit, not to its literal terms. From the central door of the palace indicated behind the middle of the stage, two female figures emerge. Seen from where we sit their masks are quite beautiful, little as we should have thought so yesterday from our closer view of these disguises. The features are strongly marked indeed, but majestic and suggest especially that of the taller woman a princely almost god-like elevation of soul. She is Antigone; the other smaller, softer and more feminine looking one is Ismene. Antigone is the first to speak and with her speech the play begins.

CURRENT EVENTS.

It may be said that there are no Current Events during the silly season, and therefore the Review for the past quarter shall be brief.

“**W**ILLING to wound and yet afraid to strike” is still the attitude of France to all her neighbours, Russia excepted, while at home she is settling down to the acceptance of her present system of government. The elections have made havoc with every group not loyal to the Republic, and, unfortunately, with almost every man above mediocrity. With M. Clemenceau rejected because of rumours that no one believes, and M. Wilson and the Panamists elected though proven guilty of corruption, what shall be said of the average elector? Has he grown an inch since the day when the Athenian voter ostracised Aristides, because he was “tired of a man whom everybody called the Just?” France has gained no laurels in Siam, but Lord Rosebery has added to his chaplet. He drew the lines calmly where British interests would be involved, and, as the indispensable man in any Government has a free hand, all that he demanded was conceded, and then it was impossible for the French Foreign Minister to hark back, though the Paris heathen raged and revenged themselves by insulting Lord Dufferin, to whose thorough knowledge of the East they attributed the victory of the British Foreign office. “The hand of iron in the glove of silk” was never needed more, for it is about as easy to play with a bear robbed of her whelps as to diplomatize with France in her present mood.

The more she chafes the firmer becomes the German grip on the lost provinces. Her army manœuvres on the frontier were answered in kind by the Emperor William, and his good reception in Metz and Strasbourg, with all the attendant circumstances of the presence of the Prince of Naples, the passing by the Reichstag of the Army Bill, the intention of Italy to give harbourage to the German fleet, and the growing cordial feeling for the young Emperor in England, have struck home. What if Alsace and Lorraine should become German in spirit, as they are in language, before the war of revenge can be commenced? The very thought gives heart chills to the most sanguine, and in vain they try to find comfort by demonstrating their ardent affection for Russia. Notwithstanding, there will be no war this year, and, unless the unexpected happens, none for a long time to come. Russia is not prepared, and she cannot borrow. France is heaping up her own debt too rapidly to allow her to lend to an ally that is perilously near insolvency. On the other hand, the people of Germany are determined to stand by the work of Bismarck; and Italy and Austro-Hungary know that their only salvation is in a solid Dreibund. Meanwhile, what a spectacle of the absurdities of human nature is presented in the maudlin affection of the Republics of France and the United States for a Power that scarcely cares to conceal its contempt for their fundamental political principles and practice!

THE Home Rule Bill has been snowed under by the House of Lords, and Mr. Bull takes it calmly. The Bench of Bishops, twenty or thirty strong, voting against it, with a unanimity not begotten of profound thought, was almost enough to make him suspect a soul of goodness in it, but almost is not enough. Mr. Gladstone intends to have an Autumn Session that may kill him, physical marvel though he is, and, after drawing a few red herrings across the scent, to appeal to the country for another blank cheque. Will he get it? The star-gazers and monthly prognosticators say no, but the Unionists are uneasy lest Providence should hide a few aces up the sleeves of "the old Parliamentary hand." If he does get it, now that the public know how it will be filled up, a Home Ruler of longer standing than Mr. Gladstone must come to the conclusion that political sanity has departed from the British people, or that oratory in the nineteenth century is more bewitching than it was in the days of Demosthenes. The Bill is a medley of startling incongruities and the Parnellites openly, and the Anti-Parnellites silently, take it only as a lever. Mr. Gladstone's enthusiasm is apparently born of the conviction that the Act of Union was immoral, because Grattan's Parliament was bribed. The logical conclusion would be either to make the best of the Union by treating England, Scotland and Ireland alike, or to abolish it and restore to Ireland her Protestant Parliament, or at any rate a Parliament with similar powers. There would be principle and safety in either course. There is none in a Bill that promises nothing but friction and unlimited possibilities for log-rolling.

"Them's my principles, but, if they don't suit, they kin be changed," was the frank confession of faith made by a politician out West. Mr. Gladstone's diction, on the crucial question of the retention of Irish members in the House of Commons, is more refined, but not less frank. "We accepted from the country the retention of the Irish Members, and we accept from the House their retention for all purposes." This, in spite of the fact that he had declared himself unalterably opposed to what he thinks now is the will of the Country and the will of the House! In other words, "I am ready to accept anything but defeat. My conviction is that the Irish Members should be out of the House of Commons for all purposes. As that could not be carried I proposed that they be out for some things and in for others. The Whips tell me that that will be defeated, and therefore, at a day's notice to the Country, I propose that they be in for all purposes." How small the G. O. M. looks beside Mr. Cleveland!

G.

ONE can easily understand the mental confusion of many a citizen of the Great Republic when he attempts to understand the present money problem. He has been often told, in the last few years, by those who have looked into the matter, that a financial

crisis was threatened owing to the issue of too much currency in the purchase of silver. But when the crisis actually arrived he found that its chief outward symptom was an unusual scarcity of currency of any kind. Immediately the silver advocate chimed in with his "I told you so! What this country wants is not less money, but a good deal more of it;—free coinage of silver, in fact." Next, the McKinleyite raised his industrious cry to the effect that the whole difficulty was due to the threatened changes in the tariff. When we remember that the confused citizen occupies the greater part of the bench in the final court of appeal for all such cases, the ultimate issue is far from certain. One idea, however, seems to have found lodgement in the majority of influential heads, namely, that the monthly purchases by the Treasury of such large quantities of silver have something to do with the crisis, and therefore had better be stopped. This is encouraging, as it shows that when matters become pressing, intelligence has still the upper hand, even in a democracy.

The connection between an overissue of currency and a subsequent famine of it is seen to be rigid enough when once we understand the function of credit in modern commerce. About nine-tenths of the business of a country like the United States is conducted on a credit basis; checks, drafts, bills of exchange, bank credits, clearing-house transactions, etc., taking the place of currency in making exchanges. But this implies two chief conditions, namely good credit and a sound basis for currency; for all credit instruments rest upon currency, and all currency in the United States, as in most other commercial countries, is ultimately redeemable in gold. This is an extremely useful but very delicate structure, and if any considerable part of it, especially the foundation, is weakened the whole is immediately threatened with destruction. But the foundation was weakened when gold was driven out of the country, owing to the over issue of paper currency in payment for silver purchases. This soon threatened general credit, and caused the more cautious of those who knew what was likely to come, to change their bank deposits and other credits into currency, and, if possible, into gold, which they stored away in the vaults of safe-deposit companies, the modern representatives of the strong boxes and money stockings of our ancestors. The action of the knowing ones alarmed the less knowing ones, and so the crisis developed and spread, until the function of credit was very much contracted and the function of currency very much expanded. But, there being no sudden expansion of currency possible, a currency or money famine was the first result, and the suspension of a great deal of industry and commerce the second and necessarily consequent result. An over-supply of water may burst a reservoir and there may be some who will attribute the consequent water famine to a drought and others who will attribute it to an intention on the part of the city council to improve the fire department. These explanations may produce civic confusion, but will hardly alter the facts.

A. S.

THE financial depression in the United States, during July and August, was not more extraordinary than the speedy recovery, at all events in business circles. We have had new proof that no nation can be independent of the world in its finance, and proof also of the buoyancy of our neighbours and their illimitable resources. They are not out of the woods yet, for a minority in the Senate—every member of which knows that he is enthusiastically backed by his own constituents—can give a great deal of trouble. When the Silver Repeal Bill was passed by the popular House with an overwhelming majority, everyone said that the Senate would pass it in a fortnight. More than a month has gone and there is still no sign of the end. Something might be done if Mr. Cleveland would only consent to dicker, but “he is not built that way.” The country is convinced that the Sherman Purchase Act is at the bottom of the foreign distrust which causes the withdrawal of gold, and the President has therefore declared that the cause of the evil must be taken out of the way. When that has been done, it will be in order to consider whether anything is needed to give more elasticity to the currency system. The action of the Senate is making thinking men fancy that the Constitution of Statia is not so perfect as they imagined, and that it must be radically reformed. If this idea could only get into the heads of the people it would be an unmixed blessing, for the root of their Chauvinism is that “the earth revolves on its axis, subject to the Constitution of the United States.”

Though financial circles have recovered from their paralysis, industry still halts. How much of this is normal and how much is caused by the determination of protected industries to frighten the Democratic party from interfering with the tariff, it is difficult to say. By throwing nearly a million of workmen out of employment, they produce wide-spread misery, but they say to the voters of Ohio and Iowa, “you see the results of threatened competition with “the pauper labour of Britain,” and you can guess how much worse actual competition would be!” The argument will influence thousands, but if it makes the Democrats false to their creed and their pledges, so much the worse for them. They will have to find another leader, and Mr. Cleveland will have to form a new party. Courage is the one thing they need, but it is also the one thing that party politicians are least likely to possess.

G.

NOT long ago Sir Hector Langevin, in a special interview published in one of the Montreal papers, gave his reasons for maintaining that the French-Canadians should prefer British rule to all others, even to that of France itself. His reasons make very interesting reading, but are a good deal less complimentary to British rule, as the Briton prides himself on it, than even the ‘perfidious Albion’ articles which appear from time to time in certain Lower

Canadian papers. The central thread of Sir Hector's argument is to the effect that British rule has preserved Quebec from all those changes which the rest of the world has been undergoing within the last century and a quarter. British rule, we may say, has acted as a kind of gem jar for Quebec, effectually preserving the purity of its dialect and the antiquity of its institutions. According to Sir Hector, Lower Canadians should be specially thankful for having been protected from the so-called progress which France has made the state of things which preceded the Revolution. Thus Quebec, in the purely French portions of it, may be regarded as a genuine fossil specimen of the pre-Revolution period, exhibiting its distinctive economic, legal, social, religious and educational institutions and customs. But, according to Sir Hector, the Lower Canadian should be no less grateful to England for having protected his province from British and American influences as well, which are more to be feared for the present and future, as being closer at hand. He feels confident, too, that Britain will continue this generous protection; so that, if the Lower Canadians are only true to themselves and their past, which is also their present, there is every reason to hope that they may be able to preserve their ancient condition, if not to all eternity, yet easily to the end of time. Many of us have long known that such was practically the result of British rule in Quebec, but it is interesting to find Sir Hector putting it in the straightforward fashion of this interview. It helps too to explain why the Government of which Sir Hector was so prominent a member should have taken pains to put such a tax on all instruments of education and enlightenment as renders Canada absolutely unique in that respect among civilized or even semi-civilized nations. A. S.

CANADIANS are pluming themselves too much on their financial stability. The Premier tells us that in the States banks failed last summer, at the rate of one to 300,000 people, while there was only one failure in Canada to our five millions. Is he ignorant that a point of difference between the banking systems of the two countries explains our apparent good fortune? We have central banks that establish branches wherever they are likely to get business. Across the line, there are no branches. Every little town has its independent bank or banks. Thus, when the Commercial Bank in Winnipeg closed its doors, its seventeen branches had also to close. Counting these eighteen banks, our rate would be one failure to 275,000 people! Our Banking system is undoubtedly better, but bragging is a poor business, especially when there is little or nothing to brag about.

MANITOBA felt the failure of its popular local bank less than was expected, partly because no one doubted that depositors would be paid, but mainly because every one was cheered with the

prospects of a good harvest. Slowly the people are learning that the North-west is not an El-Dorado where men can pick up a fortune in four or five years. The industrious and intelligent can make a good living, and there is perhaps less room in Manitoba than elsewhere for other classes. Wheat is a sure crop only in some districts, and even in those the yield is nothing like the 40 bushels to the acre that emigration agents promise. Why should the country pay men to coax foreigners to accept from us free farms? The best agent is the successful immigrant. He sends for two or three neighbours, taking care to invite only those who are likely to succeed. They in their turn bring others. All that a Government ought to do is to secure easy access to the land, cheap transportation to the best markets and permission to trade there freely. These things attended to, the North-west will fill up, and with the right kind of people, instead of with the dead-beats of other countries, who will stay in it only long enough to give it a bad name. We have tried the 'how not to do it' policy for some time, with the result that Manitoba has not added five thousand to its population this year through immigration. The unsuccessful immigrant warns off all his old neighbours.

But, it is a glorious country and its future is sure. Pioneer settlers there, as everywhere else, have everything to learn, but the next generation builds on their hardly learned experience. "How are you faring?" I asked an old friend whom I met recently in North-Western Manitoba. "Finely, now," was the answer, "but it was heart-breaking work for eleven years. I stuck to wheat, and it looked beautiful till within a week or two of harvest, and then it was destroyed, generally by frost, sometimes by hail, gophers, drought or wet. I then tried mixed farming, stock, pigs, and horses, and am doing well." "But might you not have learned in less than eleven years that Nature did not intend to give you wheat?" "Perhaps so, but I had bought expensive agricultural implements and made all my arrangements for it, and hope whispered me to persevere." That's the story that hundreds tell. But many will not wait eleven years. They shake the dust from their feet and write to their friends to try Patagonia if they like, but by all means to give a wide berth to Manitoba.

OUR two parties are bidding eagerly for popular favour at present. The conditions of success are very simple. The independent vote must be won and it can be won only by a frank policy. Mr. Laurier has many things in his favour, but what does he mean by perpetually saying that if the interests of Canada and England conflict, he is for Canada? If the meaning is only what is on the surface, there is no need of such a wise saw. If there is something underneath, let it be told. Such phrases win nobody and repel thousands who have lost faith in the N.P., but will not unite with a party whose destination is uncertain. Besides, countries are not made by leaders who profess selfishness. We expect them to strike a high note and to suppress sectionalism. How would we take a parallel

assertion from Lord Salisbury or Mr. Gladstone? Apparently, it was not in the interest of England to quarrel with her best customer for the sake of Canada. Neither are the interests of the London furriers the same as those of the Canadian sealers. But British statesmen disdain or at any rate avoid such talk. If we are part of an Empire that gives us a controlling power in all negotiations where our interests are involved, that has always stood by us when attacked or threatened, and that has set the world an example of free trade for fifty years, where can the conflict come in? There is a fine field between the two parties for Mr. McCarthy, if he will only let sleeping dogs lie and devote his attention to dogs that are eating up the childrens' bread.

THE crowds at the Chicago Fair for the last two or three months are what we anticipated, and now wild-cat proposals are made to keep it open all winter or to resume next May. The Chicago papers may mislead the managers on this as they did with regard to the popular sentiment on Sunday opening, and then the Exposition will end like the Rhine, in marshes and mud banks. It deserves a better fate.

The most interesting feature to thousands was "The Parliament of Religions," held for weeks in the Art Institute. It was a remarkable illustration of the radical changes that have taken place in civilization within the last quarter of a century, and that foreshadow a new birth of time. Such gatherings could not have been held at any earlier moment in the history of the race, though we were told of antecedent germs. Colonel Higginson claimed that the first Parliament of Religion was held when the signing of the Declaration of Independence was signalized by a Jew walking between two Christian ministers through the streets of Philadelphia! Speakers from India put in a better claim when they told how the Emperor Akbar had assembled at Delhi men of all religions to inquire of them concerning their special doctrines. The doctors of Divinity were shocked at the Emperor's latitudinarianism. "Did he fancy that there was good in any religion but Islam? What was the need of enquiry? Such a spirit was opposed to every (Islamitic) principle." So said Budaoni, who had a proper horror of enquiry and comparison. But even the Delhi Congress could not compare with Chicago. Representatives—in most cases worthy—of the three great branches of Christendom and of every Christian country sat on the same platform, and united with chosen representatives of every historic faith and civilization in the Universal Prayer and in Praise to the one living and true God! Appended to these notes is the response for Canada, made at the opening meeting. G.

RESPONSE ON BEHALF OF CANADA TO ADDRESS OF
WELCOME, AT THE WORLD'S PARLIAMENT
OF RELIGIONS.

THE Dominion of Canada, is of recent creation, but the fact that the greatest of the World's Exhibitions is being held in the United States and in the City of Chicago proves that antiquity is not an indispensable element in national or civic greatness. That our Parliament is not for controversy but for friendly comparison reminds me that there can not be controversy where there is accurate definition ; therefore, the word Canada should be defined, and this is all the more necessary, inasmuch as its meaning has been officially changed three times within the last 120 years.

By the Quebec Act of 1774, Canada included not only the lands watered by the St. Lawrence but those great States also, whose exhaustless tribute promises to make Chicago in due time the wealthiest and most populous centre in the world. A few years thereafter, at the close of the Revolutionary War, although France and Spain, the allies of Congress, were eager that those ample boundaries should be preserved, Lord Shelburne—a disciple of Adam Smith—was Premier of Great Britain long enough to endow the thirteen States with this great West ; and the Commissioners of Congress, Franklin, Jay and Adams, received the splendid gift with joy, counted it a pledge of reconciliation as well as peace, and promised in return perpetual friendship and free trade between the mother and the eldest daughter. By this action, Canada was restricted to the regions now known as the Provinces of Ontario and Quebec. Recently, another change was made. By the British North American Act of 1867, the Maritime Provinces of Nova Scotia and New Brunswick were united federally with the interior Provinces to constitute the Dominion of Canada ; and in a few years after, the illimitable North-west, British Columbia and Prince Edward Island were added to the new Confederacy. Canada therefore now means a country bounded on three sides by three oceans, and on the fourth by the lakes and the watershed of the continent.

What has this young giant to do with a Parliament of Religions ? Does it not require all its time and energy to clear and fence its farm ? Has it yet been able to reflect, or to say a single word on the fundamental questions of thought and life ? Is it likely to offer any contribution to the solution of the mysteries which oppress man whenever he begins to reflect ?

God, who appointed the bounds of our habitation, made us the natural keystone between the old world of northern Europe and the older world of China and Japan. We are also the living link between Great Britain and the sunny lands under the Southern Cross.

We are thus the bridge between East and West, and the bond that unites the three great self-governing parts of the British Empire.

Our place in history is equally significant. Instead of violently disrupting ourselves from the past, we have gradually evolved from one stage of self-government to another. We have therefore not been obliged to sacrifice any of the inestimable treasures accumulated by our fathers, while at the same time we keep eyes and minds open to receive new teaching from this new world where everything is possible to man. Let me call your attention briefly to the meaning of these two facts.

The supposed existence of a northwest passage to the Indies was the dream that long allured hardy navigators, who believed in the earth's rotundity but had not the data for determining its size. In our day it has been found that that great northwest passage is not by sea or river but by land. We have discovered that the shortest way from the old world to Japan and China is across Canada. So, Canada feels herself now to be the link between Europe and the East, as well as the link between the great sections of our own Empire.

How is it possible for a people so situated to be parochial? How can they refuse to meet in a genial way the representatives of other religions? Across our broad land thousands are coming and going from east to west, mingling with us, and we are obliged to meet them as man should always meet man. Not only so, but on that great ocean which is the true Mediterranean and which is to be the arena of the future commerce of the world,—our sons are showing that they intend to play an important part. Our position, as the fourth maritime nation of the world as regards ocean tonnage, shows the aptitude of our people for foreign trade, and sailors owning the ships they sail are more likely than any others to learn the lesson that the life of the world is one, that truth is one, that all men are brothers and that the service of humanity is the most acceptable form of religion to the Common Father.

Therefore, we feel that we have a right not so much to receive, as to join with you in extending, a welcome to those from different nations, whose faiths are different, but whose spiritual natures and necessities are the same, in whom dwelleth that Eternal Power and Person that is the true light which lighteth every man that cometh into the world, and all of whom therefore must recognize Him, when He is rightly presented to them, even as all needles must point to one pole.

Our racial, political and religious evolution educates us along the same line as does our place in the world. Our racial evolution Parkman has described in pages glowing with purple light. He has told of the two centuries of conflict between France and Britain for the possession of this fair young continent, and he has shown that, while outward failure was the part of the former, all the heroisms and enduring successes were not with the conquerors. France gave without stint the great explorers, whose names are sown all over this continent thick as a field,—martyrs and missionaries of deathless fame, saintly women whose works do still follow them. Their blood was not lost in vast inland seas and on rugged Laurentian and

Huronian rocks. It fell on good soil and we see its permanent memorial now in a noble French speaking people, enjoying their own language, laws and institutions under a flag identified with their liberties and under a constitution that they and their fathers have helped to hammer out. Their children sit side by side in our federal parliament with the children of their ancestral foes and the only real contest between them is, which shall serve Canada best. The union of the two races and languages was needed to enable England to do her imperial work. Will not the same union enable Canada to do a like work, and does it not force us to see good elsewhere, and not least in those whom our ancestors may have thought enemies?

Our political evolution has had the same lesson for us. It has taught us to borrow ideas with equal impartiality from sources apparently opposite. We have borrowed the federal idea from you and our parliamentary, cabinet and judicial systems from Britain, and so we have formed a constitution better than that which either the mother country or the older daughter enjoys. At any rate we have made it ourselves and it fits us; and our evolution has taught us that ideas belong to no one country, that they are the common property of mankind and that we should borrow from every country that has found by experiment that they work well.

Our religious evolution has taught us the same thing. We have been enabled to accomplish a measure of religious unification greater than either the mother land or the United States has found possible. Eighteen years ago, for instance, all the Presbyterian denominations united into one church wide as the Dominion of Canada. Immediately thereafter the Methodist churches took the same step, and now different Protestant churches have appointed committees to see whether it is not possible to have a larger union, and the young life of Canada says "Amen" to the proposal.

It is easy for a people with such an environment to understand that where men differ they must be in error, that truth is the only thing which permanently unites, that every age has its problems to solve, that it is the glory of the human mind to solve or to try to solve them, and that no church or nation has a monopoly of the truth or of the spirit of the living God.

Mr. Chairman, it seems to me that we should begin this parliament of religions not with a consciousness that we are doing a great thing, but with a humble and lowly confession of sin and failure. How will you explain the slow progress and the comparative failure of Christianity? Why have not the inhabitants of the world fallen before truth? The fault is ours. The Apostle Paul, looking back on nineteen centuries of marvellous God-guided history, saw as the key to all its mazes that Jehovah had been stretching out his hands all day long to a disobedient and gainsaying people; in other words, although there was always a faithful remnant, Israel as a nation did not understand Jehovah and therefore failed to understand its own mission.

If St. Paul were here to-day would he not utter the same sad confession with regard to the nineteen centuries since Christ? Would he not say that we have been proud of our christianity instead of allowing our Chris-

tianity to humble and crucify us : that we have boasted of christianity as something we possessed instead of allowing it to possess us : that we have divorced it from the moral and spiritual order of the world instead of seeing that it is that which interpenetrates, interprets, completes, and verifies that order, and that so we have hidden its glory and lessened its power ? "All day long," our Saviour has been saying, "I have stretched out my hands to a disobedient and gainsaying people."

But, sir, the only indispensable condition of success is that we recognize the cause of our failure, that we confess it with humble, lowly, penitent and obedient minds, and that with quenchless courage and faith we henceforward go forth and do otherwise.

BOOK REVIEWS.

An Elementary Treatise on Modern Pure Geometry, by R. Lachlan, M.A. Mc-Millan & Co., London and New York.

An Elementary Treatise on Pure Geometry, by John Wellesley Russell, M.A. Clarendon Press Series.

BOTH of the above works, being the product of English mathematicians, and appearing so nearly at the same time, would seem to indicate that the study of modern geometry has suddenly taken a stride forward in Great Britain. Although for many years past it has been pursued in a sort of dilettante way by the English student, English works on the subject have hitherto been rather small in number and incomplete in matter, and a student wishing to study the subject was largely under the necessity of resorting to the works of French and German writers.

It seems to the American mind very strange that this should be so, and it is difficult to know to what to attribute it unless it be to intense British conservatism, for every person acquainted with the ancient method of geometry as exhibited in Euclid and the modern methods as exemplified in the above works cannot fail to understand and appreciate the great advantage which the modern has over the ancient, both in matter and method; in fact, the ancient may be said to be characterized by particularization, while the modern makes extensive use of generalization. Some twenty years ago, the only English works available on modern geometry were Townsends's "Modern Geometry," written in a repulsive style, some sketches of work by Mulcahey, and odds and ends of the subject distributed through various papers; since that time, we have got a small but unsystematic account of the subject in Casey's 'Sequel to Euclid,' several attempts to bring it into notice by sandwiching many of its important results among the problems of Euclid, and the translation by Leudesdorf of the justly celebrated work of Cremona on projective geometry.

The books whose titles head this article are both very welcome

works on the subject of modern pure geometry, and although pursuing somewhat different lines, they cannot fail to be appreciated by the geometrical student.

Mr. Lachlan's work is plainly and simply written, and although confining himself to the line and circle, he has brought together and exhibited in a very pleasant way a large mass of beautiful and interesting geometrical fact. His book contains 282 pages and is divided into 16 chapters dealing with such subjects as 'Harmonicizm,' 'Involution,' 'Perspective,' 'Similarity,' 'Polar Reciprocation,' 'Inversion,' and 'Theory of the Cross Ratio.' It is beautifully printed, in large type and on good paper. The figures are large and plain; great numbers of exercises are interspersed throughout the work, besides a number of examples which are fully worked out for the benefit of the student.

Mr. Russell's work although employing largely the same operative methods as Mr. Lachlan's adds to these a theory of projection, and applies these processes very largely to the conic; in fact the work might almost be described as the modern geometry of the conic. Although presented as an elementary treatise, it will be found to be very full of the matter of which it treats. The student who takes up Mr. Russell's work will find it pretty tersely presented, and therefore somewhat difficult to follow, but the mastery of it will certainly put him in possession of the principal properties of the conic sections. D.

REPORTS SUBMITTED TO THE ANNUAL MEETING OF TRUSTEES.

PHYSIOLOGICAL APPARATUS.

Another consignment of apparatus has arrived for the physiological and histological side of our work in the faculty of medicine. The chief instruments are a railway myograph, a recording cylinder, and a very fine microtome. The latter instrument was much needed in histology and pathology last winter. The total cost of this addition to the apparatus is about \$200. Two large gas cylinders have also been added at a cost of \$35, the manufacture of Messrs. Elliott Bros., Kingston. These will be used in supplying gas for the oxyhydrogen lantern, an instrument which will likely be largely used in teaching physiology and histology next session. Subscriptions amounting to \$500 have already been received for this work, but more are needed. Friends interested will kindly communicate with the Principal, the Dean, or Dr. Herald, Secretary of the faculty.

Dr. Hans Virchow, professor extraordinarius of comparative anatomy in the University of Berlin spent six weeks in the biological

laboratory of Queen's during May and June. He is a son of the celebrated Virchow of pathological fame, but in place of following in the line of the brilliant work inaugurated by his father, he has judged it best to try original work in an entirely different line. He came out to America in March at the instance of the Prussian government, and assisted in the arrangement and display of the German educational exhibit at Chicago. His own contribution to the World's Fair was an apparatus designed to facilitate the teaching of human anatomy. It enables a lecturer to elevate and display a dissection to a large class. The cadaver or any part of it may be raised, turned into any position, or lowered by merely pulling a few cords. It is unnecessary to say that it is not patented.

After completing his work at the Exhibition, Dr. Virchow threw himself with all the enthusiasm of a young scientist into an investigation of three points: (1) the eyes of *lepidosteus* and *amia*, (2) the blood supply of their head, especially of the gills of *lepidosteus*, and (3) the embryology of this same animal, especially its nitellus or yolk sack. These fish are not found in Germany. From Agassiz papers on these forms he knew that they were to be found in the St. Lawrence, and he was in Kingston only a few days when he obtained the material he sought. The eggs gave him more trouble. These he could not find anywhere along the shore, but a journey to Black Lake, N. Y., furnished him with immense numbers of the minute fry, as well as of the eggs in almost every stage of incubation. He was a proud man when he returned. For five weeks, in company with myself, he worked on his material almost night and day. Injecting, dissecting, drawing, writing, there seemed no end to the rapidity and accuracy with which he worked. On the first two points he reached satisfactory conclusions, but he had not time to complete his investigations on their embryology. This he will do after reaching home. Meanwhile he has left behind him very pleasant memories, and a substantial gift to the University of an apparatus for the artificial hatching of fish eggs.

While in Kingston he was the guest of the Hon. Dr. Sullivan, who assisted him by every means in his power.

A. P. KNIGHT.

MUSEUM.

The Curator begs to report that during the past year very few additions have been made to the Museum collections. No appropriation was granted at the last meeting of the Board for defraying expenses of collecting, and the Curator did not feel justified in incurring additional expenditure, beyond the amount necessary for current needs.

The Herbarium has been increased and improved by the mounting and labelling of a number of Phanogams, but no Cryptogams have been received for many years. Additional collections of these are now necessary for Class use.

The Mineralogical collection has been gone over and re-arranged, and many duplicate specimens have been transferred to the Science Hall. We have now a sufficient number of the common rocks of Ontario for the use of the Geological classes, but the rocks and minerals of the formations not represented in this province are greatly needed. We have almost nothing from any locality west of Sudbury. Additional collections of fossils would be gladly received.

No additions have been made to the collection of animals. The specimens which were attacked last year by destructive insects were saturated with a solution of Corrosive Sublimate and exposed to the fresh air for most of the summer, and at present there is no evidence of the reappearance of insects. Last spring a committee was appointed to consider what additional accommodation was necessary for the preservation and exhibition of specimens, for which we have not at present suitable cases. Two new table casss were recommended, but they have not been procured. A case for Insects is also necessary to preserve them from ruin. Many specimens have been already destroyed for want of a proper case.

The usual grant of \$30.00 has been sufficient to cover the expenses for paper for mounting plants, for alcohol, bottles and labels. A similar amount will be required for the present year.

I intend to visit Chicago during the summer, and would like to spend a short time collecting in the mining regions of Michigan. I could secure valuable additions to our Mineralogical department in the Museum and in the Science Hall at no great expense, and could also obtain specimens otherwise unobtainable.

It would be a source of much pleasure if the members of the Board would visit the Museum and see what we have and what we require.

JAMES FOWLER, *Curator.*

CHEMISTRY AND MINERALOGY.

During the past Session 113 students have been attending lectures in this department. Of these 61 were studying medicine, 50 were pursuing an arts course, and 2 were doing post-graduate work. With very few exceptions, the students in this department have also done laboratory work, the total number thus engaged during the year being

105. With the increased facilities afforded by the new building, the labour involved in preparing and overseeing the work for so large a number has been reduced to a minimum. It is still, however, a severe tax upon the energies of men who in addition are preparing and delivering an average of two experimental lectures a day for five days in the week. It would be advisable, when circumstances permit, to appoint a medical man to carry on the class in Analytical Chemistry (Medical), and to give a course of lectures on physiological and pathological chemistry, to form part of the senior course for medical students.

The collections of rocks and minerals have been largely increased. During the last two sessions the number of specimens has grown from a few hundred to more than three thousand. Most of these have been brought in by prospectors and mining men, and they are especially valuable as representing the mineral character of our own and the adjoining provinces. Former students have also brought or sent some good specimens. We have no means of displaying a collection of minerals, and are looking forward to the time when a suitable room can be furnished in the attic. This will enable the students to read with the specimens before them. At present, they have to content themselves with such observation as they can carry on during a lecture. Such a room could also receive the standard set of crystal models, at present not very accessible.

A good feature of the past session's work has been the constant use made of the library. The books most frequently required were put by themselves in a compartment for which a number of keys were made. Each student received a key in return for a deposit of 25 cents. The books in this department were in constant use; so much so that some of them will need to be rebound after a few sessions. The library is a very small one, and needs large additions in order to bring it up to the requirements of the work. Scientific books are expensive; and the annual allowance for my department does not go far.

In conclusion, I must mention with pleasure the admirable character of the work done by Mr. Nicol. His enthusiasm and mastery of details have enabled him to carry on his trying work with great success, and, as enthusiasm is contagious, it has been a feature of the session's work.

I enclose statement of receipts and expenditures with vouchers.

W. L. GOODWIN, *Professor*.

QUEEN'S QUARTERLY.

ORDINARY RECEIPTS.	
To Balance.....	\$ 49 04
Allowance from Trustees....	300 00
Apparatus & Laboratory fees,	519 00
Sundries	131 66
	<hr/>
	\$999 70

EXTRAORDINARY RECEIPTS.	
Vote of Finance Committee	\$279 85
	<hr/>
	\$279 85

ORDINARY EXPENSES.	
To Wages	\$299 50
Coal and Gas	188 35
Apparatus and Chemicals	396 20
Plumbing, Carpentering, etc.	95 61
Balance.....	20 04
	<hr/>
	\$999 70

EXTRAORDINARY EXPENSES.	
Deficit from 1891-1892.....	\$ 67 32
Carpentering, A. Cameron	110 09
Plumbing, Elliott Bros	47 99
Pulley for Gas Engine, Kingston	
Foundry	26 50
Belt for Gas Engine, Ford Bros..	8 45
Setting up Gas Engine, H. Youlden	11 00
Furniture, J. Reid.....	8 50
	<hr/>
	\$279 85

OBSERVATORY.

During the past Session fortnightly lectures have been delivered in the Junior class by Professor Dupuis and myself; and weekly lectures and exercises in Theoretical Astronomy, together with the use of the instruments of observation, the Theodolite, Sextant, Transit, and Equatorial, have been given to the Senior class in the Observatory building.

The determination of the errors of the Sidereal and mean time Clocks has been regularly carried on throughout the year, and a number of observations of the more important phenomena have been made, more especially with regard to the recent oppositions of Mars and Jupiter.

The new filar micrometer, and web of wires, for the Transit, and ring micrometer for the Equatorial, have been received from Messrs. Fauth and Co., and have given me entire satisfaction. The cost, about \$90, has been almost wholly defrayed from the apparatus fees of the Department of Physics. Some small additional expenses have been incurred by repairs in connection with the shutters of the Transit room and Dome.

All the instruments are in excellent working order, and no change has been found in the perfect stability of the Transit piers.

The work required in making and recording observations would be greatly facilitated by my having the assistance from time to time of some deserving Senior Student resident in Kingston, particularly in the necessary observations at night.

All which is respectfully submitted by

JAMES WILLIAMSON,
Director of Observatory.

PHYSICAL LABORATORY.

Herewith I enclose the account of moneys spent by me during the past year. I have made connection between the dynamo in the School of Chemistry and the Physics class-room. This will be of great use when the arrangements in connection with it are completed.

Having had the assistance of Mr. Carmichael again this winter, I was enabled to invite the students of the Physics Classes to do laboratory work in the afternoons. Twenty students took advantage of this offer, a few of whom gave it up, on account of pressure of other classes. This work the students liked and appreciated. Mr. Carmichael makes an admirable Laboratory assistant, and for the special assistance needed I could not get a better.

As I reported last year, the accommodation afforded by this building is not suited for any such extension as Laboratory classes, and it has been at great inconvenience that we have carried them on these three years. Were it possible to place the Senate room at my disposal for a Laboratory it would supply present wants.

An alternative suggestion would be to fit up my present workshop, and to convert another room in the basement into a workshop. This would not be satisfactory, but it might do for a time. The only satisfactory solution of our present difficulties is to put up a new building and equip it for the Physical and Biological Departments of the University. An assistant who could give his whole time to Physics would then be needed.

D. H. MARSHALL,

Professor of Physics.

PHYSICAL LABORATORY RECEIPTS.		PHYSICAL LABORATORY EXPENDITURE.	
To Balance.....	\$144 69	Paid N. R. Carmichael	\$150 00
Interest.....	2 15	Dr. Williamson, for Obser-	
Apparatus Fees	299 00	vatory.....	55 00
Hartington's Physics, sold ..	5 60	Table for Professor Fowler.	11 00
		Connecting Dynamo.....	25 90
		Barometers, Theomometers	
		Hydrometers, etc., as per	
		receipts	35 69
		Balance in Bank	173 85
	<hr/> \$451 44		<hr/> \$451 44

BOTANY AND GEOLOGY.

To the Board of Trustees, Queen's College:

GENTLEMEN,—During the Session just closed, the following classes have been under my care: Medical Botany, 20 Students; Arts Botany, 21 Students; Senior Science, 22 Students; Honour Botany, 1st year, 8 Students; Honour Botany, 2nd year, 2 Students; Honour Geology, 1st year, 8 Students; Honour Geology, 2nd year, 3 Students.

A larger amount of work than usual was accomplished, as many of the students were teachers and candidates for Specialist standing in Science. This class of students is likely to increase and it is therefore very desirable to secure as far as possible the necessary equipment for Laboratory work. During the year a number of the maps issued by the Geological Survey were procured and mounted for class use, but several additional ones are required to illustrate the Geological structure of the Dominion. The maps are obtained free, but cost 25 cents each for mounting. Some botanical microscopes are necessary, as each student requires one for his own use.

Our collection of Cryptogamous plants for Honour classes is now utterly inadequate. Very few Musci or Hepaticæ can be found in the neighborhood of the city, or in the cultivated parts of the country. The forest districts must be visited to procure them. Should the Board deem it advisable, I will visit some of the nearest forests and endeavour to procure such a supply as the districts may afford. No collection of Cryptogams, except one from Prof. Macoun many years ago, has ever been presented to the College, and none has been made by students.

The expense for maps mentioned above \$15.00.

Expenses for next year's work :—

Three (3) Botanical microscopes with accessories, \$30.....	\$90 00
20 additional maps	5 00
Expenses for collecting Cryptogams	25 00

JAMES FOWLER,
Professor.

ANIMAL BIOLOGY.

The attendance in *Junior Zoology* numbered 19; in *Honor Zoology*, 11; in *Histology*, 53; in *Junior Physiology*, 34; in *Senior Physiology*, 30.

The *Histology* and *Physiology* classes included both arts and medical students, the course being the same this year for both, viz., the *Physiology* and *Histology* of vertebrates with special reference to mammals.

In the *Junior* class there was the usual brief outline of the morpho-

logy of the whole animal kingdom, followed by an equally brief outline of vertebrate physiology.

The principle on which I endeavored to carry on my work was that the study of the forms of animals, or morphology, should precede or accompany the study of their functions or physiology.

In the case of arts students the principle was easily applied; but in the case of medical students, the lack of an elementary knowledge of morphology and of the principles of physics formed a serious difficulty in the way of good teaching.

A good beginning has been made in providing for practical instruction in Histology. There are now 24 microscopes in the Laboratory, 10 of which, with one of the best freezing microtomes in the market, were purchased last autumn at a cost of \$265. There was also bought at the same time two high power lenses (objectives) by Leitz, for doing work in Bacteriology, which, with the one presented by Dr. Clark, of Rockwood, are worth \$100. We have also one of Zeiss's best Camerae Lucidae, a stage micrometer and eye-piece micrometer.

For practical instruction in Physiology there were imported from Britain in December instruments adapted for experiments on the force and frequency of the *Pulse* and the Heart, on the circulation of the blood, on the effects of electricity on muscle and nerve, and I am every day expecting the arrival of apparatus for recording the phenomena of circulation and respiration. The total cost of this apparatus will probably reach \$400. It includes Du Bois Raymond's inductorium, electric keys and commutators, muscle forceps, revolving drum, railway myograph, tambours, cardiograph, sphygmograph, time-marker, metronome, electrodes, muscle lever, chronograph, etc.

Next Session, thanks to Professor Dupuis, I shall have a lantern which I shall use extensively in teaching Morphology, Physiology and Histology. The instrument is Professor Dupuis', and an equally good one would cost the college \$50. The gas cylinders are to cost \$35, and the gas force pump about \$40 or \$50—the exact sum cannot be stated. It is being made at the Locomotive Works from plans drawn by Professor Dupuis, who will have to make the most delicate parts himself, viz., the *valves*. Professor Marshall will pay for the gas force pump out of his apparatus fund. A dark room should be fitted up in the Science building, in which lantern slides could be made, as they are very expensive if we have to buy them. It should not cost over \$12 to partition it off and fit with the shelves. A lantern screen will cost \$5 or \$6.

I beg leave to make the following recommendations:

1. The whole work of my department be transferred to the Medical building. This will include the transfer of museum specimens, maps, apparatus, and books of reference.
2. That the sum of \$50 be appropriated for the purchase of museum bottles and specimens.
3. That nine large microscopes, and four dissecting microscopes be

purchased for the Laboratory. Professor Fowler tells me that he will need these which I borrowed from him last winter. Cost \$300.

4. That a further supply of dissecting dishes be placed in the Laboratory at a cost of \$10 or \$12.

5. That a number of models and additional apparatus for teaching Morphology and Physiology be bought in Germany or France. A few pieces could be made here in part by a carpenter and in part by myself. Cost of what is pressing, \$200.

6. That an annual fee of \$2 per student be charged for the use of microscopes, reagents, and drawing books, in both Dr. Anglin's class and mine.

As to the room now used for Histoigy, Pathology and Museum combined, the floor should be raised, and separate tables placed opposite each window; the central part of the room should then be seated with benches, as in all other class rooms so that the room could be used for lecture purposes; but these improvements may wait until more pressing needs are supplied.

ARCHIBALD P. KNIGHT,
Professor.

LIBRARIAN'S REPORT.

During the past year 1,002 volumes have been added to the Library. Of these, 267 vols. represent a generous donation from the well-known publisher, Mr. F. A. Brockhaus, of Leipzig, Germany. I was able to arrange about the selection of them while in Leipzig last summer. Of the others, 158 vols. were presented by various governments, scientific societies, publishers and private persons, among whom the publishing firm of Messrs. Macmillan & Co., and the Rev. S. Mylne, of Smith's Falls, deserve special mention.

The remainder, 576 vols. were purchased.

The total receipts for the past year amounted to \$1,840.91, made up as follows:

Balance from last year	\$ 110 96
Regular receipts from the Treasurer	1,290 00
Special fund obtained by the Principal.....	380 00
Refund of overcharges in Customs duty.....	59 95

Total expenditure for the past year.....	\$1,840 91
	1,698 49

Balance on hand.....	\$142 42
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Within the past year the new shelving has been placed in the library, and paid for out of Mrs. Acheson's bequest. Though it does

not improve the appearance of the room, yet the book accommodation is more than doubled, and, at any future time, the shelving may be easily removed to another building.

The Principal has provided a book-case for the students' consulting room. This has been filled with dictionaries, encyclopædias and other works of reference to which the students have access, and of which they constantly avail themselves.

In addition to these, and other books placed in class bookcases, the students use the general library to the extent of about four hundred volumes per month.

As it became impossible for me to attend to the work of giving out and taking in books, in addition to the regular work in my department and to the other library duties, the Nicholls scholarship, value \$100, was awarded to a student taking a post-graduate course, on condition of his assisting the Librarian. Mr. John A. Sinclair, M.A., held the scholarship during the past session and, with the assistance of Mr. Ikehara,—whose time was paid for by Mr. Hugh MacLennan, Montreal,—attended to giving out and taking in books.

As the work of my special department, Political Science, is rapidly increasing, I hope that, at no distant time, the Trustees may be able to relieve me of the position of Librarian. The duties of the Librarian are also growing with the growth of the University.

ADAM SHORTT, *Librarian.*

Facsimiles of Manuscripts in European Archives Relating to America, 1773-1783.

B. F. Stevens, London.

This is a very unique and remarkable publication, relating to the most critical period in the history of North America. The exceptional character of the work, beyond the value of the records themselves, lies in the unquestionable accuracy of the reproductions. In these sheets we have not only the words of the original documents but the very handwriting with all the incidental elements of alteration and erasure. As material for historical research they are perfect. The period from 1773 to 1783 covers most of the short time during which the United States and Canada were connected with the same British government. Many of the documents reproduced relate directly to Canada, and most of the others have an important bearing on her history. The entire collection, most of which is already issued, will contain facsimile reproductions of about 3,000 documents. The cost of the complete series will be \$500,—not a high price when we consider the necessary expense of such an undertaking. This sum, however, puts the work beyond the reach of our modest library allowance. An act equally generous and public spirited, on the part of some one interested in the history of Canada, and with means sufficient, would place within the reach of our professors and students this store-house of original material from which many may draw supplies, and yet none the less be left for their successors.

EXTRACTS FROM LETTERS RECEIVED BY THE MANAGING EDITOR.

The following extracts are an indication of the manner in which the QUARTERLY has been received. Our list of subscribers is already of respectable dimensions, and steadily growing.

"DEAR QUARTERLY,—I like you. You look clean and, for your age, healthy. You are well dressed—here and there a dropped stitch excepted. You make a graceful bow and speak with becoming modesty. There is a ring in your tone I like, sturdy, resonant, independent. You are not too confident either. That is wise. Some of your predecessors perished from hunger; some of your fellows are staggering on trying to grow fat on great gulps of the east wind.

I am not a Queen's man, but I am a Canadian and glad to do anything to help take away the disgrace marking our higher journalism. Put me on your list, the enclosed to pay for the privilege."

(This from a Sister University.)

"Please put me down for one year's subscription to the QUARTERLY. The first number was excellent. With best wishes for its success."

(From New York.)

"I have much pleasure in enclosing my subscription to the QUEEN'S QUARTERLY, the first number of which I have read with the greatest satisfaction."

(From Turkey in Asia.)

"The first number of QUEEN'S QUARTERLY reached me duly and I have read it with very special interest. Would that we could have had something of this sort years ago."

"I am glad that the enterprise of Queen's Alumni has produced such a periodical and I wish it all success. I thoroughly appreciate the freedom from theological bias which promises to characterize its management."

* *

"If you can make each number as good as the first, I think its success is assured, for it will be *a necessity to many*."

* *

"The first number is splendid, and gives assurance of the kind of stuff that is to be furnished."

* *

"Such a magazine was what the graduates desired, and I am sure every graduate will become a subscriber."

QUEEN'S QUARTERLY.

VOL. I.

JANUARY, 1894.

No. 3.

All articles intended for publication, books for review, exchanges,—and all correspondence relating thereto—should be addressed to the editors, Box A, Queen's University, Kingston, Ontario.

ERRATA.

On page 191, line 34, insert before "the Spenserian stanza" *ottava rima and*.

On page 193, line 19, for second "will-he" read *will-he*.

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and at the Reformation all the Protestant Churches, with one or two exceptions that were determined otherwise more by political than by religious forces, took the Presbyterian form, even when they did not take the name. What then are the fundamental principles of this daughter of the Reformation?

The principles of a Church constitute the law of its being. They may be obscured for a time. They may be denied outright by zealots; but if they are true they will reassert themselves. They are the only basis on which reunion can properly be effected. The Church must be broad enough to include all who are faithful to its basic principles, and strong enough to include varieties of opinion not inconsistent with its life.

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Everyone admits that the Reformers were great men. They were only men, however, and they were the children of their time. They did not see all truth, and the truth they did see was mingled with error and expressed in the language of the 16th and 17th centuries, which, it need hardly be said, was vigorous, especially when used controversially. What we would call Billingsgate was the ordinary language, even when men like Luther, Milton, and Rutherford took up the pen to answer opponents. That however was only the literary form of the time, and we are searching for principles.

First, then, the Reformers were above everything else men of faith, and the essence of their faith was the Gospel. To use a word that has been much abused, they were evangelical, and they found the evangel in the Bible. They believed that God had revealed himself to Israel as a God of redeeming love, and that His revelation had culminated in the Christ. As the revelation was recorded in Holy Scriptures they counted these beyond all price, and they studied them under all the lights of their time, and with all the fearlessness of men of science, who may doubt their own powers but never doubt truth, no matter in what volume it may be revealed. Erasmus, Reuchlin, Luther, Melancthon, Calvin, were the scholars and higher critics of their day, and the monks and many good people clamoured against them on that ground. Were they not bold, bad men, who were substituting human learning for the divine treasure which in the hands of the Church had proved itself powerful to convert the nations of Europe? They were saying that a New Testament in that new language—Greek—was better than the grand old Vulgate, and they were studying Hebrew, though it was well known that all who did so became Jews. The clamour that then filled the air means to us no more than the cackling of multitudinous geese, that has long since died away, but then it was the voice of the Church, loud, strident, terrible. Except in those places where the moral laxity of monks and priests had outraged the public conscience, the majority was opposed to the Reformers. Tradition is strong and habit stronger; the people generally could not read; books were scarce; and of course the Church as an organization was opposed to change that imperilled the fabric. The innovators were warned that by disturbing the faith of the people they were bringing innumerable

woes on society, and it was significantly added that in the interest of souls it would be necessary to "deal with" them, if they did not keep silent. Some were silenced, but others held on in their course. They believed that the more the Bible was investigated, the more its divine power would assert itself, and that though the faith of some might be shaken, the searchers for truth were not responsible for that. That result was only what had happened in the Apostles' days, when ignorant and unsteadfast men wrested the words of Paul, and the other Scriptures also, unto their own destruction.

It was, however, not their scholarship and their criticism but their faith that made the Reformers heroes. They had found deliverance from sin, and reconciliation with God at the foot of the Cross. *Ubi crux, ibi lux*. From that point of view they fearlessly judged even the Scriptures. A book that did not preach the Gospel was a book of straw, even though included in the Canon. A book that did preach it was precious, whether written by an Apostle or not. Luther appealed from the authority of the Church to the authority of the Scripture. He identified Scripture with his interpretation of Scripture, and his method of interpretation while it gave him the root of the matter, was at once too broad and too narrow. It must therefore give place to a scientific method such as the successors of the Reformers are now elaborating and which they intend to perfect, if the Church will only have patience and allow them to do their work. The Church, however, now has much of the spirit that it has had in every century, downward and upward, from the days when its Chief Court condemned Jesus, gnashed with the teeth at St. Stephen, and excommunicated Luther. It is heart-breaking to all who love the Church that it should be so. But, so it is. What then is the first principle of the Presbyterian Church? It is evangelical, and the good news which it preaches is that which is contained in the Word of God. It is not necessary to confine ourselves to the scholarship of the Reformers, to their libraries and critical implements, to their defective methods and defective science, to their illusions and their errors. It is not necessary to imitate their sins of word and deed against others, or their mistakes in hermeneutics. But it is necessary that we should be united with God through faith in Christ, as they were, and that

we should prize the Bible as the medium through which the knowledge of God in Christ is given to men. It is also necessary that we should study it, freely, intelligently, with the best available apparatus and according to approved scientific methods. Let us understand what this does not mean and what it does mean. To honour Holy Scripture as the literature which contains the Revelation of God as a God of Grace does not mean faith in any *a priori* theory of Inspiration ; does not mean that all the books in the Bible are of equal authority ; does not mean faith in the good Jewish Scribes, who did a grand work under the light they had, who searched diligently for the precious remains of their ancient prophets and psalmists, without finding all that had been spoken or written, and who edited, compiled and codified those that they did find amid the ruins of the nation ; does not mean a denial of human elements in the Bible that were absolutely necessary if its words were to be understood of the people to whom they were addressed, nor the assertion that myth, legend, allegory, fable, poetry, proverb and parable are less appropriate media of revelation than Statistical Columns, Blue-books, Catechetical formulas or other accepted forms of literature. Different views on these points may be tolerated, for they are not of the essence of the faith. In investigating them, we must have the large liberty that the Reformers exercised. They purchased that freedom for us and let not the modern Church that builds their monuments take it away, by threatening all the pains and penalties that the civil magistrate allows it to inflict, and which it has inflicted again and again ; not on the timid, for they are cowed into silence, and so a greater wrong is inflicted on them than if they were punished externally ; not on the worldly-minded, for they are not going to peril their reputation or their salary ; not on the intellectually inert, for they have no irrepressible desire to study ; not on the conformist and traditionalist, for they are satisfied often honestly with the past ; but on the men whom the Church should thank God for, though they make mistakes ; the men whose minds are open, the men of honest hearts and sensitive consciences, who speak though they know that speech will cost them everything usually held dear, when silence would preserve them in the honour and affection of those whom they love. Let the Church take its stand on this distinction between faith in

the Gospel and the word of God on the one hand, and all questions of scholarship on the other. Great shall be its gain thereby. It may at last obtain deliverance from that bondage to the letter which has been its curse in every age and the essence of which is idolatry ; not the idolatry of wood and stone that is comparatively harmless, but the idolatry of God-given institutions and God-inspired words in the stead of God Himself, the idolatry which led Israel to persecute every prophet with such unbroken continuity, that Jesus said concerning His own impending fate, with a pathos the burden of which words are too weak too bear, "it cannot be that a prophet perish out of Jerusalem" !

Secondly, the Reformers were Churchmen. They did not believe that the individual sentiment expressed the whole religious nature of men, and that the term "visible Church" was "erroneous." Only in society is man understood and only in society does he attain the perfection of his being. They believed that the Lord founded a society or Church, with Himself as Supreme lawgiver and Head, gave an initiatory rite and an outward bond of union, a definite portion of time for public worship and special service, along with injunctions, aims, promises and penalties that a society requires for its guidance, and which are now scripturally fixed for all time. Our fathers were not schismatics. Though they had no conception of that law of evolution which is the regnant principle in modern thought that gives meaning and oneness to all life and all history, they saw that the Church had been a unity to a very wonderful extent from the days of the Apostles, and they believed that unity was the ideal condition, and to be realized as far as possible. They studied and prized the writings of the fathers. They shuddered at the thought of breaking in pieces the body of Christ. But what could they do ? The organized Church cast them out, therefore on it was the sin of the schism. The bishops fought against them, till the Landgrave of Hesse, translated Luther's motto of V. D. M. I. E. (*Verbum Dei manet in Eternum*) as *Verbum Diaboli manet in Episcopis*. A new organization had to be formed, and for this they fell back on New Testament precedents which they sought to apply or adapt to the actual circumstances of the time. The Church in each country was to be national, in the true sense of the word. It was

to embrace all who accepted the Gospel; and all national Churches were to be united in one great confederation of faith.

Thirdly, the Reformers believed in publicly confessing their creed, or setting it forth in formal statements from time to time. The Churches of Germany, of Switzerland, of France, of Holland drew up confessions, not once, but again and again as they were called for. These confessions were testimonies not tests. They were drawn up, sometimes by one man and sometimes by a body of men, but no sanctity was attached to the wording, and they were not imposed on ministers or people. The men that drew up one this year could draw up another and probably a better in after years, just as the man who can preach one good sermon can preach a thousand. They were as willing to lay aside one confession for another as we are to lay aside an old coat for a new one. It would never have occurred to them to send the old coat down to hundreds of Presbyteries, that thousands of critics might pick holes in it, propose patches of different colors, add a new cuff or a collar, or a tail-piece, unravel it, darn it, or reconstruct it, "lock, stock and barrel." They were far too busy and too earnest to dream of making such a mistake, although they made mistakes enough, some of which we have been trying to explain away ever since, to their inextinguishable laughter, I doubt not, if they are permitted to know what is going on upon the earth and if they have preserved that sense of humour which the greatest of them had when in the body. John Knox, for instance, drew up a Confession of Faith in 1548, which he sent from captivity in France to "his best beloved brethren of the congregation of the Castle of St. Andrews, and to all Professors of Christ's true Evangel." Then, when the Parliament of Scotland met in 1560, a petition having been circulated for the abolition of Romanism and the adoption of the Gospel, the ministers and barons were ordered to submit a summary of the Reformed doctrines. "Within foure dayis" this was done, Knox of course taking a prominent part in the work. The summary was read to the Parliament, and after reasoning and voting was ratified, and the Protestant form of faith established. That confession was an admirable piece of work, superior in some respects to the Westminster, and it remained the confession of the Church of Scotland during the heroic epoch of its history. If ever there was a confession that

a Church should have esteemed sacred, it was that one. What made the proud, tenacious, stubborn people of Scotland lay it aside for another, drawn up in the next century by an assembly of Englishmen, that was simply "a Council of advice to the Parliament of England." The two dominating principles already mentioned; a faith in the Gospel that made them comparatively indifferent to formulas, and a burning desire for the religious unity of the three nations that God had made one. The Westminster confession was a compromise in its title and in its contents, and while a splendid memorial and high-water mark of the religious thought of the age, it is difficult to know whether we should be most astonished at the total rejection of it by England or at the prostration of spirit with which it was long received by the Churches of Scotland and the North of Ireland, and their offspring on this continent. The Moderator of the Free Church of Scotland, in his closing address to the General Assembly last May called attention to the "curious fact that while the common people of Scotland have long been distinguished for subtle and strenuous thought on the highest of all themes, we have hardly produced a divine who has made his mark and taken his place among the great teachers of truth." It is more than curious. It is a most melancholy, humbling and suggestive fact. The reason is not far to seek. What was originally a testimony was made a test. The flower of the soul of one age was converted by a strange alchemy into an iron bond for future generations. Our fathers walked freely in the domain of religious truth, because they had faith that God was not dead and would not die, and that there was wisdom in His word sufficient for the wants of their age and of every age. Their sons were smaller men. They preferred to nibble at the mouldy manna of yesterday's gathering to going out into God's open field to gather fresh manna for themselves. What is the process by which a man becomes a great teacher of truth, or writes a book that adds permanently to our store? He has to labour and to wrestle for years. Truth dawns slowly on the mind, and it comes to the most earnest seeker only in the rough, precious ore mixed with dross. Even after much refining, dross remains. When the word that the thinker may have brooded over for years is spoken or published, it is a quarter or half a century, or perhaps more, in advance of the average man. This

is God's way of leading on the average man to wider conceptions. But, suppose that instead of submitting to God's way, listening courteously to the teaching, patiently considering it or assisting to remove the dross, the average man considers it his only duty to unite with others like himself to execute swift vengeance on the author! Here, he says, is a man who is not keeping to the beaten track and eating the regular provender, like a well-trained ox content with doing the allotted task. Let him leave the Church and not give trouble to people who have no desire for novelties, or we shall put him out. This is the actually approved modern method of ecclesiastical procedure. What does it mean? That the Church has no desire to train "great teachers of truth," and does not believe in the evolution of the divine purpose. Worse, if worse can be, it means the bribery and corruption of the timid and the venal,—the offer of a premium on dulness, a premium on indolence, a premium on dishonesty. Its equivalent word in the nation would be, whosoever writes a book throwing new light, or what he thinks new light, on constitutional questions, should begin by abandoning his citizenship; or whosoever proposes a new law, should as in old Greece enter the market place with a halter round his neck. You ask, what if a man has signed the confession? Surely the essence of the confession is the Gospel, and he is trying to bring out that essence more clearly. He may differ from the confession, and yet be in real accord with its thought and aim; just as new prophets differed from the old, yet the later always built on the former and were animated by the same spirit. Jehoiakim put the prophet Uriah to death, because,—apparently in opposition to Isaiah who had declared the inviolability of Zion—he asserted that it would be destroyed; the priests and the prophets would have put Jeremiah to death for the same offence, had not the princes and the common people interfered. Their word from Jehovah was opposed to the word that Isaiah had spoken a century before, and therefore the regular priests and prophets of their day thought them heretical. It is sometimes said that the minister in whose mind new thoughts are stirring should submit them to the Presbytery. But thoughts on religion cannot be summed up in sentences, and the only practicable way of presenting them to the Presbytery is by giving them to the public. The Presbytery does not sit continuously, and is not competent to

act as a censor or *index expurgatorius*. It is said that any man who thinks God has given him new light might enter some other Church, where his new point of view would be tolerated. Nothing shows more clearly how far we have departed from our fathers conception of the Church than this astonishing plea. To those who make it, the Church is not the body of Christ into which we have been baptized and in which we have an inheritance from our birth more precious than rubies, but a voluntary club that exists to perpetuate a compromise document that some good Englishmen drew up two and a half centuries ago. According to this the Church does not make confessions, but the Westminster confession made the Church !

How can a Church expect to produce great divines if it muzzles the thinker and scholar ? It is bad enough when a Church that declares that it has all truth already and that its judgment is infallible does this ; but when the great Church of the Reformation is guilty, it is false to its own principles ; and when it pleads with sons who would fain do it honour to become aliens, deserters, schismatics, anything, rather than oblige it to think or to tolerate thinking, it confesses to spiritual impotency that is even more melancholy than brutality.

Fourthly, the Reformers asserted the democratic principle, and embodied it in representative legislatures and courts, to express the will and preserve the unity of the Church. They may not have recognized all that was involved in this principle, but they discovered the individual and gave him his rightful place in the Church and in society, and that is the essence of democracy. They taught that man as man entered into union with God by a spiritual act, and that every man who did so was a king, a priest, and a prophet. Appeal against the excessive authority of the Church was made to the Bible and to men's reason, illuminated by the Spirit of God. The Bible was given to the people and the community was invited to search and to decide for itself. In constituting Church Courts, too, the rights of the people were preserved. For instance, in the first General Assembly of the Church of Scotland, held in 1560, there were 46 members, of whom only 6 were ministers ; and in the first Book of Discipline, drawn up by that body, it was enjoined that elders and deacons should be elected annually by the congregation !

I need scarcely point out how far we have departed in practice from this principle. We have made our Church government aristocratic. The laity are wholly unrepresented in our Church Courts, except in as far as it may be said that all the members are laymen, because we have abolished the medieval distinction of clergy and laity. Elders cannot be called laymen. They must be students of divinity. It would be immoral to ask them to subscribe to hundreds of theological propositions that they had not studied. With us, they are ordained in the same way as ministers to the office, and they are appointed for life. It is sometimes said that the Constitution of the States and indeed the representative system generally was copied from Presbyterianism. To see the two side by side, as they actually are, it is evident that the one is now a caricature of the other. Presbyterianism was the first to assert the democratic principle, but other Churches are carrying it out more faithfully. In the Anglican Church, for instance, any layman can be elected to sit in Synods, and as he goes there to represent the laity, he is appointed for only one year. The Synod, too, numbers twice as many lay as Clerical members, and sitting not as individuals but as orders they can never be swamped.

The democratic principle has now triumphed in the Church as well as in Society. The most despotic and the most aristocratically constituted churches admit it and pay homage to it as the real king. Can we ask for a more significant illustration of the fact than this Parliament itself? Now that Democracy has triumphed, the question is, shall the children of those who fought and bled in its cause, who stood by it in the dark and cloudy day when no man regarded, be afraid of or false to it when perhaps their aid is needed more than ever. For Democracy does not mean disorder in Church or in State. It must be organized and it cries for leadership and organization, but it demands that those who would be its guides shall trust it, for those who do not trust may betray.

I have sketched the principles that must be accepted as the basis of any future union; the Evangelical principle, the Church principle, the national and confessional principles, and the democratic principle. How far the Presbyterian Churches have been faithful to these in the course of their history cannot be dis-

cussed here. Whether faithful or unfaithful in the past, the question is, are we prepared to act upon them now? If so, it seems to me that the circumstances in which we meet give us a wider horizon and a wider outlook than Presbyterian Reunion, though that might come first, if under the form of going forward we take care not to go backward. As there is a Greater Britain, which has manifested itself at our meetings, so there is a Greater Presbyterianism, to which we should appeal. Our principles are now accepted as heartily by the Methodist, the Congregational, the Lutheran, the Reformed and other Churches as by ourselves, and accepted also by vast masses in the Baptist, Episcopal and Roman Catholic Churches. If we are the children of our fathers, we shall consider whether a new birth of time is not at hand and whether God is not calling upon us to forget the things that are behind, and reach forward unto those that are before. "Speak unto the children of Israel that they go forward."

Mr. Chairman, you have asked me, though belonging to a neighbouring country, to address you on this subject, probably because the Presbyterians of Canada have effected Reunion and are looking forward to greater things. Pardon me if I have spoken unadvisedly, and bear with me while I suggest that we need first of all, to ask forgiveness of God for sins and shortcomings, which have been all the more inexcusable on our part, because we are the heirs of illustrious forefathers and the sharers of priceless privileges which they bought with their blood. I ventured to address a similar word to my fellow Christians in the Parliament of Religions. We have been proud of our Christianity instead of allowing it to crucify us. So, have we not been proud of our Presbyterianism, instead of allowing it to purify and enlarge our vision and fit us for service and sacrifice in our own day and land, along the lines on which Luther, Calvin and Knox laboured until God called them to Himself? We have thus made Presbyterianism a sect, forgetting that Knox's prayer was, "Lord, give me Scotland or I die." God heard and answered his cry. Should not our prayer be, "Lord, give us this great and goodly land, as dear to our souls as Scotland was to Knox?" Remember that we shall never commend the Church to the people unless we have faith in the living Head of the Church; unless we believe with Ignatius, that "where Jesus Christ is, there is the Catholic Church,"

and with Robert Hall, "he that is good enough for Christ is good enough for me." Alas, our Churches have not thought so. Hence it is that from one point of view our Church history is a melancholy record. Let me explain from my own brief experience. The ablest expounder of the New Testament that I heard, when a student in Scotland, was Morrison, the founder of the Evangelical Union. Him, the U. P. Church cast out. The holiest man I ever knew was John McLeod Campbell, whose work on the Atonement is the most valuable contribution to the great subject that the nineteenth century has produced. Him, the Church of Scotland cast out. The most brilliant scholar I ever met, the man who could have done the Church greater service than any other English writer in the field of Historical Criticism, where service is most needed, was Robertson Smith. Him, the Free Church of Scotland cast out from his chair. Of course these Churches are ashamed of themselves now, but think of what they lost, think of what the Lord lost, by their sin, and if, where such vast interests are concerned, we may consider the individual, think of the unspeakable crucifixion of soul that was inflicted on the victims. It would ill become me to suggest that you do not do these things better in the United States. Yet, without adverting to recent cases, where the ashes of controversy are hot, I may be pardoned for saying that a Church which cut off at one stroke the Presbytery of New Brunswick, and subsequently those who formed the Cumberland Presbyterian Church, and at another stroke four Synods, without a trial, need not hesitate to fall on its knees with us, and cry "We have sinned." God give us the grace to repent, and strength from this time forth, to go and do otherwise!

G. M. GRANT.

CRITICAL NOTES.

THE VERSE OF ENDYMION.

ENDYMION, the first serious effort of Keats, is written like *Lamia*, and some others of his poems, in verse which for the want of any more definite name we may call the rhymed couplet. It had been the favourite measure of the school of poetry which was passing away, and even Wordsworth, influenced by traditions which had lasted since the time of Dryden, made his poetical debut draped in the elegant but somewhat artificial style of the 18th century couplet. In his *Evening Walk and Descriptive Sketches*, written respectively at the ages of 19 and 23 the rhythm has occasionally the rhetorical accents of Pope, as in the following lines :—

Just where a cloud above the mountain rears
An edge all flame, the broadening sun appears :
A long blue bar its ægis orb divides,
And breaks the spreading of its golden tides.

At other times it resembles the freer and more harmonious rhythm of Gray or Thomson :—

The song of mountain-streams, unheard by day,
Now hardly heard, beguiles my homeward way.
Air listens, like the sleeping water, still,
To catch the spiritual music of the hill.

But Woodsworth early discarded the great metrical form of the 18th century for less restricted forms of narrative and descriptive verse. A little later, Byron with his professed contempt for the changing taste of his generation, revived in the *Corsair* and *Lara* what he called the “now neglected heroic couplet.” But even he soon strayed into other measures, chiefly the popular octosyllabic verse and the Spenserian stanza. But on Keats, who followed a few years afterwards, the rhymed couplet took a deeper hold. He is the last of the greater poets with whom it is a favorite form. For Keats who even in his versification was the poetic child of

The first example takes its peculiar character from the late occurrence of the pause, the obtrusive quantity of the unaccented syllables "green" and "clear", and the presence of at least one weak or formal accent.

The second has a marked rhythmical inversion (which in all iambic rhythms may conveniently be called a choriambus), a weak accent, and an extra syllable.

The third has obtrusive quantity in "strange", a purely conventional accent on the last syllable of history, and the choriambic inversion to end with ("potent to send"), although with regard to this last point, we must keep in mind that Keats very often seems to give to final unaccented syllables like that of "potent" a value which rather resembles Italian than English speech.

There is hardly any trace of mechanical construction in Keats's verse. On his best work at any rate not a shadow of suspicion lies of this kind; and that is more than can be said of some poets whose work, taken as a whole, is of more value and significance. And when I say this, I am thinking not of Wordsworth, whose rhythm, when it is good at all, is exceedingly natural and spontaneous after a quiet fashion, but of Tennyson, in whose verse, even when it is good, you may often enough trace the mechanical mould in a certain monotony of recurring pauses and accents. Of course Tennyson is a splendid metrical artist, and what is more, a consciously critical one; what I mean is, that in his most harmonious and ambitious verse, the verse of *In Memoriam* or of the *Idylls*, he instinctively seeks the support of a stronger, more fixed, and therefore more limited basic form than singers so wholly spontaneous as Keats and Shelley.

Keats's knowledge of the metrical art is evidently far more instinctive and less critical than Tennyson's. Both in accentuation and in rhyme he seems to lose sight of the distinction between licences which are more or less conventional and recognized as amongst the liberties of the poetic art, and licences which are unusual and somewhat trying to the reader, such as placing the accent on the first syllable of "enough," or rhyming "beautiful" with "cull" and the extra unaccented syllable in "elbow" with the accented final word "slow". There is a certain heterogeneity too in the rhythm, a degree greater perhaps than is admissible in the use of the same measure in the same poem. His couplet is some-

times Miltonic in its accents, in its bold combinations and powerful roll—

like dying rolls
Of abrupt thunder, when Ionian shoals
Of dolphins bob their noses through the brine.

At other times—especially in direct narrative—he will drop into the regular canter, the firm precise movement of the old couplet.

Now when his chariot last
Its beams against the zodiac-lion cast,
There blossom'd suddenly a magic bed
Of sacred dittany, and poppies red.

Then again he will give it the light triple step of the anapest
To the swift treble pipe and humming string
Or the peculiar heaviness of the Alexandrine dragging like a wounded snake its slow length along—

nor felt, nor prest
Cool grass, nor tasted the fresh slumberous air.

There is this kind of immaturity in Endymion, the occasional falterings, the uncertain touches of the young master embracing more than he could readily accomplish. But even in the midst of these falterings there occur, at every step, lines of wonderful and original beauty—

The silver flow
Of Hero's tears, the swoon of Imogen,
Fair Pastorella in the bandit's den

lines which might have made stern Gifford—had his ears caught their melody—pause before he shot the thunderbolts of the Quarterly at this young eagle making his first bold and perhaps premature flight into the zenith.

For one can say in praise of Keats, and it is high praise, that his characteristic rhythm, almost every rhythm that is of any merit, is perfectly natural, graceful and elastic as the movement of a member of the feline species, and possesses that distinct individuality in which the medianical mould of the metre is as it were merged and lost. When it is plainest, as when it is most ambitious, it is still the natural garment of the thought, not a mould into which the thought has been with more or less artifice urged. Even his very frequent licences, his deviations from

critical rule, often turn out to be, as with all great masters of style, happy hits, real enhancements of the thought or the feeling of the line. Very rarely, indeed, do we feel in reading Keats that the sense and melody have parted company, and still more rarely, if ever, that they are up in arms against each other. Dr. Johnson would have rated a poet soundly, and with some justice, for such a licence as the formal accentuation of the first syllable of "become" in the following lines :—

No, even as the trees
That whisper round a temple become soon
Dear as the temple's self.

But even here one feels there is something in a sort inevitable and borne out by the sense in the freedom the poet has taken with the metre.

In this natural and instinctive command of rhythm Keats is a great master. His rhythmic emphasis is as just as in Shakespeare's best verse. Of critical and conscious management, on the other hand, there is less trace, much less than in Tennyson or even Shelley. The most evident is his delicate management of word-endings for unaccented syllables giving a fine ease and fluidity to his verse. He knows the value of these soft endings of which there are now so few comparatively in English. In his verse "quiet" is generally a very effective dissyllable

I'll smoothly steer
My little boat for many quiet hours.

So "flower", "cruel", "bower" and such words have their rights as dissyllables oftener recognized by him than by some of his brethren. He even makes dissyllables of verbs like "resolve" and is always on the look-out for forms like "palely" and "adown".

There is no surer test of the poet than this mastery of rhythm, which Keats everywhere shows, original rhythm, possessing a characteristic force the world has not before felt. When rhythm is at once original and powerful there must be a corresponding power and originality in the vision or the thought.

This on the whole is the meaning of the truth which Mr. Swinburne has so constantly insisted on in his critical essays, that 'the faculty of the singer is ability to sing.' But he seems much inclined to identify this faculty of rhythm with the lyrical

impetuosity and swing which after all is only a special development of the other. This is particularly the case in his comparison of Collins and Gray (see his preface to Collins in *Ward's English Poets*, Vol. III), where he denies to Gray the genuine faculty of the singer which he finds in Collins. But the rhythmical faculty of Gray is genuine enough, though like that of Tennyson it is best when it has the support of some strong and definite basic form, such as we find in the quatrains of the famous *Elegy* or of *In Memoriam*. Collins has greater range and more spontaneity, but within the limits of the pensive elegiac melody which is natural to Gray there is a mastery of rhythm as genuine and as original in him as in Collins. In whole stanzas every pause and accent expresses with a power beyond that of mere words the very pulse of the thought. I will not quote single lines of perfect rhythm, such as

Far from the madding crowd's ignoble strife.

I will take whole stanzas like this one :—

The boast of heraldry, the pomp of power
And all that beauty, all that wealth e'er gave
Await alike the inevitable hour.
The paths of glory lead but to the grave.

The finely disposed harmonies of that quatrain are none the less original and spontaneous that they do not expand in strophic freedom or lyrical overflow, and that the author is content to work under some of the restrictions which his age considered proper to versification.

This century, which is now drawing near its end, had just begun, when Wordsworth in a preface to the first edition of the *Lyrical Ballads* raised the standard of open revolt against the poetic style and traditions of its predecessor. Keats does not write polemical prefaces, but in one of his *Miscellaneous Poems* entitled *Sleep and Poetry* he has a brave fling at the older school of poetry, attacking in particular their metrical art, as Wordsworth had attacked their diction :—

But ye were dead
To things ye knew not of,—were closely wed
To musty laws lined out with wretched rule

And compass vile : so that ye taught a school
 Of dolts to smooth, inlay, and clip, and fit,
 Till like the certain wands of Jacob's wit,
 Their verses tallied. Easy was the task :
 A thousand handicraftsmen wore the mask
 Of poesy.

It was then with some consciousness of the character of his work that Keats returned to the metrical freedom of the older masters, Shakespeare and Milton. But those two unrivalled makers of rhythm hardly use the rhymed couplet at all—only *Lycidas* shows what Milton could do with it. It was an older master still that Keats was thinking of when he chose this form of verse for *Endymion*. It seems to have been Chaucer's genial and long lost art in the handling of this measure that first attracted Keats. "Unmew my soul"—he prays in an early passage of *Endymion*—

that I may dare in wayfaring
 To stammer where old Chaucer used to sing.

But although there are lines which occasionally remind us of the music of England's oldest singer he does not really attempt to recall the charming simplicity and energy of Chaucerian rhythm. What he gives us is something more akin to the languid grace and refined melody of Spenser. Chaucer's metrical couplet, the long melody and soft flow of Spenser's line, the freedom and naturalness of Shakespeare's accent and pause, and the emphasis of Milton, these are the constituent elements out of which the young poet builds his lofty rhyme. It is Milton also whom he follows in those choral melodies which he weaves into *Endymion*, and in that tendency towards rhythmical paragraphs which amongst other things gives his verse something of the same historical relation to the older couplet as the bucolic verse hexameter of Theocritus has to epic verse.

But towards the end the Spenserian element in his song seems to have grown stronger. *Isabella* and *The Eve of St. Agnes* are written in the Spenserian stanza ; and that wonderful *Ode to the Nightingale* has all the fine languor and the rich harmonies of the verse of the *Faerie Queene* :

Thou wast not born for death, immortal Bird !
 No hungry generations tread thee down :
 The voice I hear this passing night was heard
 In ancient days by emperor and clown.

Hyperion with its blank verse, its firmer accents and more energetic movement is again a reversion to Shakespearean and Miltonic ideals :

She was a Goddess of the infant world ;
 By her in stature the tall Amazon
 Had stood a pigmy's height : she would have tae'n
 Achilles by the hair and bent his neck ;
 Or with a finger stayed Ixion's wheel.

But *Hyperion* is unfinished. This great orb of song disappeared from the heavens, clearly before it had attained its meridian, even before it had steadied itself in its course ; and we can only infer from the power of its movement and something gigantic in its preliminary oscillations, how great its orbit was meant to be.

JAMES CAPPON.

THE HEART.

(FROM HERMANN NEUMANN)

Two chambers has the heart
 Wherein do dwell
 Sorrow and Joy apart.
 When Joy wakes in her nest
 Sorrow is still
 And lies in quiet rest.
 Oh Joy—beware—nor break
 The calm—speak low
 Lest Sorrow should awake.

LOIS SAUNDERS.

HOW TO GET DIVORCED.

WE do not hear anything about divorces prior to the time of Adam. That patriarch divorced his first wife, Lilith. She was created out of clay at the same time as was he, and so deemed herself his equal and becoming proud and troublesome was put away and expelled from Eden. Adam then married Eve and poor Lilith went to the Devil, whom she espoused and by whom she had a number of children, called Jins,—half men, half devils (Moses, Book I, ch. I, 27 : ch. II, 18 et seq : Ab. Ecchellensis, p. 268). Since that early date where has been marriage, there has been divorce.

Space forbids us following all adown the ages these proofs of the failure of marriage ; and as none of our readers, however fossilized and antique, can avail themselves of the modes and reasons for divorce in vogue ere C. Columbus embarked on the “ Santa Maria,” our references to such will be short.

As on the ages when the earth was young Eve and her daughters had little to say as to marriage, having to accept it as a child does physic will-he, will-he,—so Lilith and her unhappy successors had few rights that were respected on the dissolution of the bonds of wedlock. The Hebrew merely had to write out a “bill of divorcement,” hand it to his wife and then send her away—no wrangling, no law expenses ; that she found “ no favor in his eyes,” was cause sufficient. One venerable Rabbi said a man could divorce his wife if she spoilt his dinner, or if he met another woman that pleased him better. Josephus informs us that he himself had been thrice wed ; why and how he and the first wife separated we know not ; the second he put away after they had three children “ not being pleased with her character,” (for the children’s sake we hope it was better than his) ; the third he praises highly,—she was probably looking over his shoulder as he wrote. For certain very grave reasons a Jewish wife could demand a divorce ; if she got it she lost her dowry ; some reasons were, if the husband was attacked by leprosy, if his occupation was very repugnant to her, if he deceived her, or habitually ill-

treated her, or refused to support her, or if he gave her no child. If a divorced wife married, the first husband could never again take her to wife. (Moses, B. V. ch. xxiv, 1-4; A. Weil, *Le Femme Jeune*.) In old days the Jews very conveniently had "divorces on condition"; they were first used to neatly evade the law of Moses mentioned in the twenty-fifth chapter of his fifth book (verses 5-10). The expectant widow not being in love with the kinsman whom the law destined for her second husband, got the first on his death-bed to give her a bill of divorcement conditioned not to go into force until his death and to be null and void should he recover. If the husband died, she became not his widow but a divorced woman, and thus saved from her brother-in-law. And when a Jew went on a journey into a far country he was (in later days) obliged to leave with his wife a bill of divorcement to take effect at a certain time did he not return; without this the wife would have to be deemed a married woman until positive news of his death was had, as the Jewish law knew nothing of presumption of death. (3 Green Bag, 381).

In India, according to the laws of Menu, (a gentleman of learning who existed sometime or other between B. C. 1280 and A. D. 400,) the husband had full liberty and authority to divorce his wife, if she indulged in intoxicating liquors, or had bad morals, or was given to contradicting him, or had an incurable disease, Says that Code: "a wife who has borne no child ought to be replaced by another in the eighth year; one whose children are all dead, in the tenth; one who has only daughters in the eleventh; the wife who speaks with bitterness instantly." The poor woman had no reciprocal rights; if she ran away she could be imprisoned or publicly repudiated. If her lord absented himself and left her without support she had patiently to await his return during eight long years if he had gone for a pious motive; six years if he were travelling for science or glory; and three years if he were roaming the world for pleasure. When these weary days of waiting were over the deserted one was still bound to her lord—but she might go and look for him. (Laws of Menu, ix, pp. 80, 81.)

Confucius, a sage who existed some twenty-four centuries ago and whose memory is still cherished by a third of the human race, had of course something to say on this subject and being a man he favored the husbands. To him it seems good

that a wife be divorced for seven causes, and these are the basis of the legal morals of China and Japan to-day; they are, disobedience to her father-in-law or mother-in-law; being childless; being immodest (a wife must not be given to loose conversation, *double entendre*, or much wine; she must not write a letter to any man, save her husband); jealousy of other women's clothes or children, or of her husband; if she has an incurable or loathsome disease; if she steals, or if she talks too much. (N. B. The Chinese express the word noise by repeating thrice the character that represents *woman*; on this point they are at one with the Rabbis who hold that the word *Eve* means *to talk*; and that the mother of us all was so called because soon after her creation there fell from heaven twelve baskets of chit-chat, she picked up nine of them while Adam was agathering the other three). These rules do not apply the other way. In China, the husband loses his power of repudiation for the above reasons when his wife has once worn mourning for a parent-in-law, when her own parents have both gone over to the majority, or when the family has grown rich. Divorce by mutual consent is admissible. If a wife runs away from her husband, he may—if he catches her—give her one hundred strokes with a bamboo and sell her to anyone willing to buy. (Letourneau, *Evolution of Marriage*, p. 241; Griffis, *Mikado Empire*, p. 527.) *The Japanese Bride* (by Naomi Tamura) tells us that for mere dislike a husband can at any time put away his wife, and that this is the most frequent cause of divorce. Such too is the poor woman's fate if she finds not favor with her mother-in-law, and we are given a sad little story of an almond-eyed bride divorced because she took for herself the upper part of a fish, it being very bony, and gave her spouse the lower part which was better eating; the old lady was furious because of right the upper part was the husband's; a quarrel ensued; then came a dissolution of marriage. In Japan, a man's freedom of divorce is greatly checked by his dread of fathers-in-law, brothers and other male relatives of the bride, and of the tongues of the female neighbours. (A reference to these oriental laws seemed necessary owing to the number of the *alumni* and *alumnae* of Queen's who go out as missionaries to India, China and Japan, and the College authorities do not wish them to become matrimonial shipwrecks.)

In Burmah they have a mode of divorce which is as follows, a quarrel having arisen between husband and wife and life together being a burden, all the family relations on either side assemble, squat on bamboo mats, and puffing cigars try to patch up a peace; if their endeavors fail, the elders of the district are summoned, and after hearing the story, they appoint arbitrators; then two candles, wax or rush lights, are selected, equal in length and thickness, one for the husband and one for the wife; these are simultaneously lighted, and placed on the table, if there is one, if not on the floor. Great care is taken that neither party has any advantage over the other in the shape of draughts and that all present are so seated that their breathing does not affect the flame. Breathless and solemn is the silence while these candles burn, but as one sputters out its life in the basin of water in which it is placed, a deep sigh of relief is heard. If it is the husband's candle that first goes out, then he and his relatives walk slowly out of doors, quiet and subdued, leaving his better half in possession of all the goods and chattels; if the wife's candle first succumbs to combustion, then it is she and hers who "*exeunt omnes*." A small present to the judges and umpires complete the divorce, (48 Alb. L. J. 319.)

The Koran gives to the male followers of the Prophet the absolute right of repudiation. A form was prescribed and if that was used thrice the husband could not take back his wife until she had been married to another; the law permitted him to do so in contrary cases. The husband had under these laws, four months grace within which to retract his decision; even after separation he must provide a suitable maintenance for the disowned one. In Algeria, among the Mahomedans, there are three formulas of repudiation, varying in effectiveness; using the first, the discontented husband says to his wife simply, "Go away;" and if he has said it only once or twice he may retract; if he employs the second form and says, "Thou art to me as one dead; or as the flesh of swine," he cannot take her back until she has been married to another, and divorced or left a widow. The third is so solemn that it means separation for ever, "Let thy back be turned henceforth on me, like the back of my mother." Custom admits of voluntary divorce at the proposal of the wife; this

being by mutual consent the two part as good friends. (Koran II, 227. 230 : Meynier, *Etudes sur l' Islamisme*, 168.)

Among the ancient Greeks in primitive times the right of divorce was left to the man, and he exercised it for very slight reasons. In Athens, after a time, either the husband or the wife might take the first step towards separation ; the wife might leave the husband, and the husband might dismiss the wife. Repudiations were frequent and would have been more so, but for two reasons ; the lord when he sought to exercise his right, had to restore the wife's dowry, or pay her heavy interest ; and sometimes had to support her in the future ; the lady, when she made the first move, had to appear in person before the magistrate at his office, and there present in writing, her reasons for the separation. This public act was a difficult proceeding ; Hipparate, wife of Alcebiades, stung by his outrageous licentiousness, went to the Archon to get a divorce ; Master Alcebiades got wind of the matter and rushed to the magistrate's with a band of ruffianly followers, and by brute force carried her home ; and she never got her separation. Euripides says, "Divorce is always shameful for women ;" and in *Andromache*, a gentleman remarks that for a woman to "lose her husband is to lose her life." The Cretans permitted divorce to any man who found too many olive branches beginning to cluster round his table. The Spartans seldom separated from their consorts. Demosthenes mentions several men who repudiated their wives to take to themselves rich heiresses. (Demosthenes *Against Aphodus*, and *Against Neera* ; Lecky, *European Morals*, Vol. II p. 287.)

In primitive Rome, as usual, the husband had the right of repudiation, but the wife had not. Plutarch tells us that Romulus gave the husband power to divorce his wife if she poisoned his children, or counterfeited his keys, or proved unfaithful ; if for any other reason he put her away he had to give her half his goods and to dedicate the other half to Ceres. Apparently a family council had to be called to sanction the separation. If the wife's crime led to the divorce she lost part or all of her dowry, according to the extent of her wickedness. After a time divorce by consent was admitted among the inhabitants of the Seven-hilled City ; but in this form there were certain pecuniary disadvantages to the husband whose faults led to the separation. For

a long time, however, divorce without the wife's consent was not abused in Rome : in fact it is said that there was not one for five hundred years. The formula used by the husband was brief and pointed ; he simply said, "*Res tuas habeto*," (Anglice, "take your things, and go"), and she went. When the brave old days passed away and the city became wealthy and luxurious, public opinion ceased to frown on divorce, and dissolutions of marriage in high life and low became of daily occurrence. Seneca tells us that ladies counted their years, by the number of their husbands, saying "such and such a thing happened in the days of my second, third or fourth husband." Juvenal mentions a leader of fashion who had eight husbands in five years. St. Jerome, later on, speaks of one who after having had twenty-three husbands married a man who had had twenty-three wives. Our old friends Cæsar and Pompey each divorced two wives. Caligula divorced two within sixty days or so. Claudius repudiated four, and the fifth would have gone likewise, but she preferred taking poison. Heliogabulus got rid of his first wife, because he found a mole on her body ; then he married a vestal virgin, wearied of her, but after sending away a third, fourth and fifth, was married to her again. And yet people talk of Chicago and Henry the Eighth !

Before the Lex Julia de Adulteriis no special form was necessary ; the divorce might even take place in the absence of one party. But that law required a written bill of divorce, and the record of the marriage was destroyed while the divorce was publicly registered. When Constantine came to the throne he tried to correct these corrupt propensities and introduce stricter notions of marriage. The contest was a severe one, for marriage had come to be regarded as a mere civil contract. The Christians fought hard to establish their view that the Master only allowed divorce for one cause, and that St. Paul had added one other—malicious desertion. Justinian forbade divorces by consent "unless either wished to retire into a monastery, or was a long time in captivity, or was impotent. He settled the grounds for legal divorce to be as follows : of a husband by a wife, treason ; attempting to induce her to violate her honor ; wrongfully accusing her of infidelity ; having a paramour in his house, or in the same town, after being warned more than once. The husband might divorce his wife, if she was guilty of treason, or of adultery,

or of attempting his life, or of frequenting banquets or baths with men contrary to his wishes, or staying away from home against his consent (unless with her own parents,) or going to place of public amusement, such as the circus, theatre or amphitheatre, when forbidden, (Nov. 117, 9.) Under some of the preceeding legislation, the wife could have had divorce if the husband whipped her, violated sepulchres, or was guilty of robbery or cattle stealing. The Church persistently and strenuously fought against divorce; it declared marriage a sacrament and the nuptial tie indissoluble, that divorce was sinful. "Social convenience and experience pleaded in vain." "Custom and good sense held out a long time against ecclesiastical unreason;" but at length in the Twelfth century the victory was complete and the state adopted the Canon Law and prohibited all divorce. Even in the most aggravated cases only a temporary separation was allowed; but marriages were often dissolved for causes existing prior to the union on the theory that in such cases there was no true marriage. Such has since been and now is practically the law in Roman Catholic countries. In lands which embraced the doctrines of the Reformation, a relaxation of this law has generally followed the change in religion, either immediately as in Scotland, or indirectly as in England. (Enc. Brit. sub verb. Divorce: Lecky, *European Morals*, p. 352: Letourneau, *Evolution of Marriage*, p. 245.)

In Prussia divorces are granted for infidelity, desertion, imprisonment, ill-treatment, wounded honor, antipathy and illness and upon mutual consent. Freedom of divorce was one of the short lived results of the French revolution—the code civil of 1803 allowed divorce and judicial separation. Either party could demand divorce for infidelity (although the husband got it more easily), outrage, cruelty or grave injuries, or on account of condemnation to an infamous punishment; divorce by mutual consent was also allowed. In 1816 the divorce clauses of the code were abolished, but judicial separation was retained. Freedom of divorce was, however, restored in 1884.

There was no divorce among the Pagan Irish because their marriages were only from year to year. Under the old Welsh laws a husband could repudiate his wife if she kissed any man

other than her own. If after divorcing his wife the husband married again the late wife was also free to wed. By the same old laws a woman might leave her husband if he was leprous or had bad breath: and they gave a full and particular account of how the property of the pair was to be divided when they parted company after seven years matrimonial alliance; the husband got the swine, the wife the sheep; the man twice as many of the children as the woman; the husband the poultry and one cat, the other cats went to the wife, and so on, and so on. (Ven. Code, B. II. ch. I.)

Divorces in England were until 1858 of two kinds, one partial—divorce *a mensa et thoro*; the other total, *a vinculo matrimonii*. The former was little more in the eye of the law than simple separation and only lasted until the parties saw fit to be reconciled. The latter dissolved the union altogether, either for some antecedent incapacity, or some subsequent cause which justified dissolution. The Canon Law “deemed so highly and with such mysterious reverence the nuptial tie” that causes of divorce were few and limited, and the jurisdiction was exercised by the Ecclesiastical Courts. Divorce from bed and board was granted for the scriptural ground, for cruelty or such like cause, rendering it unpracticable for the parties to live together; their legal rights remained much as they were before. The causes for annulling the marriage were fewer after the Reformation than before. After 32 Henry VIII, c. 38, the only grounds for annulling the matrimonial contract by reason of antecedent incapacity, were, relationship within prohibited degrees, a previous marriage, corporal incompetency or mental imbecility; and then the court declared that no legal tie ever existed. The dissolving of the knot for causes subsequent to the marriage was only within the province of Parliament, which, after granting relief in several special cases, about the year 1700 constituted itself a court for decreeing divorces *a vinculo matrimonii*. To get such an absolute divorce an agrieved party had first to recover damages against the adulterer, at law; then to obtain a divorce *a mensa et thoro* from a Court Ecclesiastical, then go to parliament; the whole proceedings cost between three and four thousand dollars. This was a practical denial of relief to all except the rich, and the

poor had to be content with bigamy. In 1858 a court of "Divorce and Matrimonial causes" was established under an act of parliament (its powers and functions are now exercised by the Probate and Divorce Division of the High Court of Justice), and suits for dissolution of marriage, for declaration of nullity of marriage, and for judicial separation, are now tried by this court. Parliament, however, still has the power to interfere, although it has not done so in any English case since 1857. The English law still favors the man, and will dissolve the marriage if the wife ever forgets her marriage vows, but will only relieve the woman if the erring husband has added cruelty or desertion to his breach of the seventh commandment, or if his sin has been of a particularly aggravated and horrible nature. The court may grant judicial separation (the old bed and board affair) to either party for the sin above mentioned, for cruelty, or desertion without cause, for two years or more. Not very long ago the English courts solemnly declared that a man could not be divorced after his death, any more than he could be married. (*Stanhope v. Stanhope*, 11 P. D. 103.)

An Irishman seeking an absolute divorce has still to go through the three stages that were unnecessary in England prior to 1858; another grievance this to the people of the Emerald Island.

Of our own fair land little need be said in this connection for our young men and maidens generally choose wisely and well, and for "better or for worse." In Ontario, Quebec, Manitoba and the North West an absolute divorce can only be obtained by act of parliament, and parliament may grant relief upon any of the grounds recognised by the old Ecclesiastical Courts of England as affording a claim for relief; but, so far, (except in two or three instances,) no divorce has been granted where adultery has not been charged. One divorce was granted in Ontario before 1840, and only one; between that year and Confederation there were only four applications in the Province of Canada for this relief. All these were vigorously opposed by the Roman Catholics on principle; however the bills were successful, although Her Majesty saw fit to veto one. In the twenty-one years between 1867 and 1888 the parliament of the Dominion has dissolved twenty-three marriages for the one great cause, and two where

the parties had separated immediately after the wedding ceremony and the marriage was never consummated, in one of these cases a verdant youth of seventeen had been drawn into the matrimonial vortex by a woman,—well, considerably his senior; in the other both parties had been guilty of fraud in giving false names, and the petitioner said the whole affair was a joke. In another case parliament gave a divorce equivalent to a judicial separation. Of these two dozen absolute divorces the baker's dozen was on the application of the husband, the short dozen at the instance of the wife. (Gemmill on Divorce, ch. V.) Since 1888, however, the male petitioners have been more than two to one. In Canada, we are proud to say, divorce is not as in England a perquisite of man; a wife has an equal right with a husband to a separation. With Pope Leo XIII in the Encyclical of 10th Feb., 1880, we say, what is unlawful for woman is unlawful for man.

In Ontario and Manitoba the superior courts can declare void marriage contracts in cases of fraud, duress or lunacy. In Quebec the Judges have like power for like reasons and, also, where the parties are within the prohibited degrees, and in certain cases of impotency, and even where a Protestant parson has married two Roman Catholics (Gemmill, ch. IV.) They also have in Quebec an action called *en separation de corps*, which is practically a divorce, but neither party can marry again until death farther divides them; it is granted for infidelity (but the case must be stronger against the husband than against the wife), for cruelty, grievous insult, or the non-support of the wife.

Before Confederation Nova Scotia, New Brunswick, Prince Edward Island and British Columbia each had little divorce courts absolutely separating man and wife for impotency, infidelity, pre-contract, or marriage within the forbidden degrees. Prince Edward Island has not attempted to do this since she came into Canada; but the salt waters of both the Atlantic and the Pacific seem to have a wonderfully solvent effect upon the marriage bond, for between the years 1867 and 1888 there were 109 divorces among the 810,000 inhabitants of Nova Scotia, New Brunswick and British Columbia, while among all the rest of the people of Canada there were but twenty-six. Why is this, Oh, Scientist?

The United States is pre-eminently the land of divorce ; it leads all civilized communities both in the numbers of divorces granted and in the numbers of the reasons for which they can be obtained. In the year of grace 1886, in Great Britain there were 475 absolute divorces ; in Germany 6,078 ; in France 6,211 ; in the model republic of the world, 25,535 ! The reasons why vary all the way down the list from A to W, from Alabama to Wyoming. "There is an abominable laxity of the laws on this subject." Taking the period of twenty years from 1867 to 1886, and on the basis of the census of 1881, Mr. Gemmill tells us the rates of divorce to population in Canada was one to 37,283 ; while in the Republic, on the basis of their census of 1880, the ratio was as one to 150. In those two decades 16,622 couples were divorced one year after marriage ; 21,525 after two years ; 27,270 after three years, while 25,371 were separated after twenty-one years or more of married life. As 328,716 were granted during these twenty years it is safe to say there were 484,000 applications. Of those granted nearly two-thirds were sought for by women (so the opinions of the fair sex is evident), and six thousand one hundred and twenty-two were given to husbands on account of the excessive cruelty of their wives (so much for the phrases, "the weaker sex", "the gentler sex.") The records of the courts shew that wives got divorces for the following, among other reasons : The husband runs a saloon and keeps his wife awake by talking. Does not wash himself. Has accused his wife's sister of stealing. Does not speak to his wife for months at a time. Made her climb a ladder to drive nails, and lassoed her on her way down. Abused her for having two teeth pulled. Makes her drop on her knees and bark, when he cries "Down, charge," Makes her black his boots. Treats her as a child. Enlisted in the navy. Impor-tuned her to deed him her property. Quotes scripture about wives obeying their husbands. Threw her little curly dog into the fire. Cut off her bangs by force. Would never cut his toe-nails, and scratched her every night, especially as he was restless. Never offered to take her out riding. Would not work except on Sundays.

Per contra, husbands got divorces for the following causes, among other : She said "you are no man at all." Refused to cook, and never sewed on his buttons, In certain matters

would not act without the permission of the chief of the "Brotherhood of the New Life." Called him a good-for-nothing vagabond. Goes gadding and makes him cook his own supper. Took the covering off the bed, leaving him to shiver till morning. Struck him a violent blow with her bustle. No children. Keeps him awake at night trying to get him to convey his property to her. Would not walk with him on Sunday and heaved a tea-pot at him, and pulled out his hair. Pulled him out of bed by his whiskers. Shot an old sweetheart. On the bridal tour fell in love with a German. Made him eat at a restaurant under threat of her brother thrashing him. (41 Alb. Law J. 21.) The wife had beaten and bruised him ; she had many times seized him and pulled out his hair by the handful. (*Beebe v. Beebe*, 10, Iowa, 133.) Made a false charge of infidelity against him, and it seriously affected his health. She started reports of his flirting with his clerk's wife : he thus ran risk of his clerk killing him ; this was extreme cruelty. (*Holyoke v. Holyoke*, Sup. Ct., Me., 1886 : C. v C., 30 Kan., 712.)

At times, however, even the American Courts shew some faint signs of considering easy divorce an evil ; thus, a divorce was refused to a wife for cruelty, where there was nothing more than bad temper and violent language on both sides ; (*Maben v Maben*, 72 Ia. 658.) and to a husband, in Pennsylvania, when asked on the ground that his wife had offered him such indignities as to make his condition intolerable and his life a burden. (*Power's Appeal*, 120 Pa St. 320.) In Florida it was held that putting his hand on his wife's shoulder and requesting her to leave the room was not an act of extreme cruelty ; and in Iowa it was decided that the throwing of a paper by the wife which hits the husband in the eye, was not inhuman treatment ; and divorces were refused in both cases. (*D. v D.* 21 Fla. 571 ; *W. v W.* 68 Ia. 647.) A single kick, and a blow which may have been accidental, is not extreme and repeated cruelty ; nor is jealousy on the part of the husband. (115 Ill. 102 ; 12 Or. 437.) The Michigan Courts, however, will grant divorces for a single act of cruelty. (*Hoyt v Hoyt*. 56 Mich. 50.) That the husband took the applicant for divorce to church but once in the three months of wedded life, the Judge considered a matter of little importance. (*Detrick's Appeal*, 117, Pa. St. 452.)

Yet in the Republic divorce seems to be deemed a panacea for all the infelicities and ills of married life. If the marriage yoke galls at all, relief is sought not in mutual forbearance, but in the Divorce Court. Many of the legislatures appear inclined to afford every facility asked for a dissolution of this contract. In New Hampshire there are sixteen reasons for divorce; in Delaware, two; and in New York, the only post-nuptial cause is the one mentioned by our Lord. South Carolina, alone of all the States, has always (except between 1872 and 1878) rigidly refused to suffer divorce for any cause, and yet this rigor has not tended to the promotion of the strictest morality. (Bishop. Mar. and Div. ch I. sec. 38.) In some of the Southern States divorce can only be granted by the legislature, but in most of the others Divorce Courts are in full play. All the States, except South Carolina, grant divorces for the one great cause, and most do for certain infirmities of the flesh; for desertion (in some after only six months;) habitual drunkenness; cruelty; conviction of infamous crime or felony; absence without being heard of for seven, or three years; and neglect to support the wife. Joining a religious sect disapproving of marriage, like the Shakers, is a good reason for divorce in some States; if a wife refuse to go and live in Tennessee with her husband, he can get a divorce there. In Florida, habitual violent and ungovernable temper is sufficient; in Wisconsin if the wife is given to intoxication; in Wyoming if the husband is vagrant; insanity after marriage in some States; "and any cause deemed by the court sufficient and when it is satisfied that the parties can no longer live together", will do in Washington, on the Pacific; and "any misconduct permanently destroying the happiness and defeating the purposes of the married relation," will be good cause for a divorce in Connecticut, on the Atlantic.

Doubtless there is a spirit of separation abroad in these latter days. The number of those who refuse to be bound till death them do part appears to be increasing everywhere. In Berlin between 1880 and 1885 the number of divorces rose from 412 to 754, and of the 3107 cases in the five years only one-third were for infidelity. In France in the forties there was one divorce for every 47,321 of the people, in the later seventies one for every 15,610; in the same period in Holland the ratio rose from one in

83,000 to one in 25,660. From the days of Bluff old Hal to 1857 the English Parliament had granted but 317 divorces, in the thirty years following 1857 the Divorce Courts had issued 6,381 absolute divorces and 914 decrees for judicial separations. In the United States in 1867 there were only 9,937, while in 1886 the number had risen to 25,525. In Vermont 94 were granted in 1860, and 197 in 1878; in Connecticut in 1869 there were 9 cases, while in the fifteen years after 1864 they averaged 446; and so in many other of the States. In Chicago 526 marriages were dissolved in 1875, nearly double that number in 1882. Philadelphia went from 101 in 1862 to 477 in 1882. Even in virtuous Canada Parliament has granted in the last five years twenty-two divorces as against twenty-six in the preceding twenty-two years. *O tempora ! O mores !*

R. VASHON ROGERS.

IN THE FOREST.

(FROM THE GERMAN OF LUDWIG BOWITSCH.)

Lonely I pass through the forest,
And the song of birds
Floats through the branches above me
Like love's sweet words.

Lonely I pass through the forest,
And the breath of flowers
Greets me like love's caresses
In morning hours.

Lonely I pass through the forest,
And the flowing stream
Weaves song and ripple and perfume
Into my dream.

And I find the hopes I buried
In the grave of yore,
The joy of youth and the sweetness
In the woods once more.

BACON AND SHAKESPEARE.

I.

AN intermittent controversy, extending over many years, has been waged on the question whether the dramas which pass under the name of Shakespeare were written by Shakespeare or Bacon. It would be a harsh judgment that this discussion has had no beneficial result. Untrue it would be as well as harsh, although the advantages have not been precisely of the kind which the controversialists have had most in view. Just as Saul found a kingdom while seeking an insignificant fraction of it, so these enthusiasts, while chasing all manner of ephemeral lights, have captured an acquaintance with the text of two great English authors. Perhaps it has not occurred to many of this merry rabble of contestants that Bacon and Shakespeare were both carrying to completion the same task, namely, the portrayal of new and higher ideas, and a new and higher way of life.

Poets and philosophers have not always been the best of friends. The imagination is apt to regard the processes of the understanding as a digging in the dark, while the critical faculty returns the compliment by calling the imagination superficial. This exchange of courtesies was not entirely obsolete in the days of the good Queen Bess. When Shakespeare in *Love's Labour's Lost* puts into the mouth of Biron the words

“To love, to wealth, to pomp, I pine and die,
With all these (*i.e.* his friends) living in philosophy,”

he broadly hints, as we shall see more fully in a moment, that philosophy is the adjunct of an unnatural life. Nor is *Love's Labour's Lost* the only play in which Shakespeare makes his jest upon philosophy. In the *Taming of the Shrew* the learned Tranio admonishes his master not to be a stock or Stoic, not to devote himself so much to Aristotle as to make Ovid an outcast, and to fall to mathematics and metaphysics only when his stomach serves him. He lays down the rule that there is no profit where

there is no pleasure, and bids his master follow his inclinations. The advice suits the young man, who presently under the guise of teacher to an interesting young lady reads his philosophy as follows:—

Hac ibat as I told you before,—*Simois*, I am Lucentio,—*hic est*, Son unto Vincentio of Pisa,—*Sigeia tellus*, disguised thus to get your love;—*Hic steterat*, and that Lucentio who comes a-wooing,—*Priami* is my man Tranio,—*regia* bearing my port,—*celsa senis*, that we might beguile the old pantaloon.

Hidden beneath this merry fooling is a sharp contrast between the philosophic and the real life. The poet's preference of Ovid to Aristotle is without disguise in Romeo's exclamation to the moralizing friar,

“Hang up philosophy,

Unless philosophy can make a Juliet!”

In these passages Shakespeare is thinking, it is true, of the system of thought which prevailed in his day, and his dramas, without his being clearly aware of it, contain the nucleus of a better philosophy; but that is another matter. In his earlier works he bluntly says that the study of philosophy is not an occupation for mature minds.

Bacon in turn is quite ready with his retort courteous. Of poets he says in his essay *Of Unity in Religion*. “The quarrels and divisions about religion were evils unknown to the heathen. The reason was, because the religion of the heathen consisted rather in rites and ceremonies, than in any constant belief; for you may imagine what kind of faith theirs was, when the chief doctors and fathers of the Church were the poets.” Poets, in this view, concern themselves with changing appearances and not with principles. Of the same nature is his judgment upon the special form of poetry, which was most in vogue in his time, the drama. The first sentence of his essay *Of Love* begins in this way, “The stage is more beholding to love than the life of man.” Comedy and tragedy, as Bacon thinks, unduly exalt the part which loves plays in life, and are at variance with reality. Even when he is on his guard, and “is not now in hand with censures but with omissions,” he defines poetry as “feigned history,” written because of the poverty of true history. Hence poetry, so far from being an interpretation of nature, merely points out the

inadequacy of existing interpretations. When philosophy, the sovereign interpreter, presents itself, the duty of the poet is to bow himself out. So Bacon hastens to remark, "It is not good to stay too long in the theatre. Let us now pass on to the judicial place or palace of the mind, which we are to approach and view with more reverence and attention."

This pretty quarrel between poetry and philosophy, accented as it seems to be in the minds of our Elizabethans, may be resolved, I venture to think, by a general survey of their real contribution to our literature. England at this time, it must be borne in mind, had recently broken with the Church of Rome, and emerged from a successful struggle with Spain, its champion. This movement, at once political and religious, was a sign that the idea of authority was being recast. Both queen and people, inspired by the belief that she was God's anointed, were gradually becoming convinced that the duty of ruling well was an essential part of the divine right to rule. In the mind of Elizabeth, to desire the welfare of her people was both to condescend and to be in harmony with her divine appointment. In the minds of her subjects, loyalty was allegiance to an absolute ruler, and at the same time devotion to the highest aims. When the people afterwards were persuaded that the king was not righteous, and were determined to have over them a power which answered to their convictions, there was an upheaval, which shook every corner of old England. The mere premonitions of that day, felt alike by Shakespeare and Bacon, turned the comedy of the one into tragedy, and so tangled the political life of the other as to make it even yet difficult to unravel. But that is outside of our present plan.

II.

Both Shakespeare and Bacon at the outset present their views in the form of a vigorous assault upon the ideas already in possession. Mediævalism, in one aspect or another, had been receiving no gentle treatment from several of its offspring; and our stalwart English authors took active part in the affray. Shakespeare directs his shafts in particular against the social customs of his predecessors, and Bacon against their ways of thought.

In *Love's Labour's Lost*, one of the earliest of Shakespeare's productions, the motive is unusually conspicuous. The King of Navarre, so the plot runs, eager for fame, decides to make his court the resort of such as war against their affections and devote themselves to contemplation. Those who take the vow are to live in studious seclusion for three years, not to look upon a woman during that time, one day in the week to touch no food, eat but one meal on every day beside, sleep only three hours in the night, and 'not be seen to wink of all the day.' Three lords subscribe to the regulations. Shakespeare's judgment of the transaction is placed in the mouth of Biron, the doubting Thomas of the company,

"Necessity will make us all forsworn
Three thousand times within this three years' space,
For every man with his affects (*i.e.*, affections) is born,
Not by might mastered but by special grace.
If I break faith, this word shall speak for me,
I am forsworn on 'mere necessity.'"

The arrival of the princess of France and three attendant ladies puts too great a strain upon the resolution of the devotees, and the catastrophe is a four-fold nuptial.

Shakespeare sends home his lesson in his sketch of one of the minor characters of the play, the fantastical Spaniard, Don Adriano de Armado. Observe in passing that it is a Spaniard upon whom the poet discharges the vials of his humour, and that the last part of his name is meant to recall the Armada. Direct speech is disdained by this military foreigner. He calls a boy a 'tender juvenal' or a 'tenderness of years', a girl 'a child of our grandmother Eve, a female', an apt phrase a 'congruent epitheton', and the afternoon 'the posterior of the day.' He swears 'by his sweet soul', 'by virtue', 'by the world', 'by the salt wave of the Mediterranean', and 'by the North Pole'. The rustics declare that he, along with Sir Nathaniel, a curate, and Holofernes, a pedagogue, has been at a great feast of languages and stolen the scraps, and has lived long on the alms-basket of words. He cannot multiply three by one, for, as he avows, he is ill at reckoning, which fitteth the spirit of a tapster; but he is a gentleman and a gamester, since these are the varnish of a complete man. So exquisitely polite is he, that he begs pardon of the air for

sighing, 'by thy favour, sweet welkin, I must sigh in thy face'. When he is so utterly discomposed as to smile, he makes the apology that 'the heaving of his lungs provokes him to ridiculous laughter'. Shakespeare points a moral against the vows of the lords when he tells us that they had meant to pass their time of seclusion in the company of this living unreality. But even the Don falls in love. When he has learned that he is merely in the same predicament as 'most sweet Hercules' and 'well-jointed Samson', he is reconciled to his destiny, and Jack has his Jill, or rather Adriano has his Jaquenetta. Then for the first time he speaks with sanity.

The view of Shakespeare it is not difficult to seize. It is not so much that it is vain to stem the tide of our impulses, as that it is wise to swim with it. The effort to subdue the natural inclinations had resulted in men's forswearing the full stream of the world and cultivating a barren learning. The remedy is a frank and open social intercourse, purified by 'special grace'. The boyish enthusiasm of *Love's Labour's Lost* takes for granted, it is true, the special grace, a defect for which the later plays make ample atonement. But even from this early drama we understand that the people of England have consciously turned away from the ideal implied in monastic seclusion and self-mortification, and abandoned themselves to a manner of living more in accordance with their conception of human nature. Shakespeare it is, who sings the pæan of this new life.

'The philosophy we offer,' writes Bacon in his preface to the *Novum Organum*, 'is not obvious, nor to be understood in a cursory view.' Perhaps it is not so difficult to appreciate his services in his preliminary task of putting to flight the false or inadequate notions current at his time; but when he has left 'the antechambers of nature, trodden by the multitude', and seeks an entrance into her inner apartments, it is not such a holiday matter to keep pace with him. We then feel the force of the comment made by his royal patron, when the *Novum Organum* was first issued; "It is" said James, "like the peace of God, it passeth understanding." Though King James is not correct, and this later and more difficult portion of Bacon's philosophy yields to inquiry, the program of this article permits a reference only to his earlier attempts, which are largely critical and introductory.

Like his great contemporary, "whom by some strange chance he never names",* Bacon is afflicted with what he calls *philanthropia*.† "We humbly pray," runs his invocation, "that thou, O Father, mayest be willing to endow thy family of mankind with new gifts through our hands." The way to secure these new gifts was not to 'submit the shows of things to the desires of the mind,' as do the poets, but 'to buckle and bow the mind unto the nature of things,' not 'arrogantly to search for the sciences in the narrow cells of human wit, but humbly in the greater world.' In that way alone was to be obtained the 'knowledge which is synonymous with power.'

But this end could not be pursued successfully, until the bad methods of his predecessors had been cleared away. This new kingdom of man, so Bacon declares, is like the kingdom of heaven; we cannot enter it unless we become as a little child. Two only of the false images or idols, which men have ignorantly worshipped, it is necessary for our purpose to describe, those of the market, as Bacon calls them, and those of the theatre. The current coin of the market is words, and people have always been too ready to be satisfied with the medium of exchange instead of actual things. In some cases, as in the phrases 'fortune', 'the element of fire', etc., the coin is false, for it represents nothing actual; in other cases, as 'moist', 'heavy', 'dense', it is defaced and poorly represents the reality. The task of the philosopher is to give a new meaning to the words by 'cleaving to the very pith of things'. Secondly, the idols of the theatre arise from the dogmas and sects of philosophers. 'We declare it necessary', is the dictum of the imperial thinker, 'to destroy completely the vain, little, and as it were apish imitations of the world, which have been formed in various systems of philosophy'. One of the greatest offenders is Aristotle, who is 'more anxious as to definitions in teaching and the accuracy of the wording of his propositions, than the internal truth of things'. His overwhelming reputation amongst mediæval philosophers and poets gives point to one of Bacon's most striking similes;

*Professor Nichol's *Francis Bacon, His Life and Philosophy*. See also *The Prose Works of William Wordsworth*, Vol. III. p. 457.

†Spedding's *Francis Bacon and his Times*, Vol. I. p. 57.

'time', he writes, 'is like a river, which brings down to us what is light and inflated, and lets the weighty and solid sink to the bottom'. Worse even than Aristotle are those philosophers called by Bacon empirics, who spend their whole time upon a few isolated experiments. Here the alchymists and Gilbert, the discoverer of the magnet, receive a castigation. Lastly those who look for truth in a mixture of theology and philosophy produce, as Bacon believes, either fantastical philosophy or heretical religion. With all these Bacon refuses even to enter into competition, because in his eyes their methods are wholly wrong. 'The lame in the path', he remarks, 'outstrip the swift who wander from it', and, as he alone has kept the path of systematic experiment, or in technical terms induction, he alone, however slowly and laboriously, can arrive at the true laws of nature's action. Moreover he is, when he publishes the *Novum Organum*, quite conscious that as yet 'he stands alone in this experiment'. Nevertheless while likening himself to the first vessel that has ventured beyond the pillars of Hercules and braved the untried sea, he is confident that, after he has opened the way, *multi pertransibunt et augebitur scientia*, many shall pass through, and knowledge shall be increased.

S. W. DYDE.

SPECIES.

SCIENTIFIC knowledge is a product of slow growth. The reason is not far to seek. People have been in all ages, either too busy or too unwilling to solve problems for themselves, and are only too well content to accept the first theory that may be offered them in explanation of perplexing natural phenomena. It thus happens that the superficial view of things is the one that is always accepted in the infancy of a nation and in the infancy of science.

Take, for example, the science of astronomy. For thousands of years the belief was universal that the earth was a flat and not a spherical body ; that it was the most important object of creation ; that it was placed in the middle of the universe ; and that round it all the heavenly bodies revolved. This was the famous Ptolemaic system, and it was not until the sixteenth christian century that Copernicus gave to the world the true theory of the solar system.

Take again the science of physics. What more natural than the conception of the constitution of matter entertained by the Greeks? They knew that many material objects exist in the solid, liquid, or gaseous condition, and that many objects, such as metals, may be changed from one of these forms to another. What more natural than that they should conclude, after seeing a piece of burning wood or molten metal, that heat and solid formed fire, or, after seeing water boil and disappear in the air, that heat and fluids formed air? Reasoning on the results of these and similar observations, they reached the general conclusion that everything in nature was made up of fire, air, earth, and water, mixed in varying proportions or subjected to varying degrees of heat and cold. Nor was it until the end of the seventeenth century that sounder views began to prevail, and gradually gave rise to the two sciences now known as physics and chemistry.

Ancient biology—the science of animal and plant life was also studied, if studied at all, in a superficial way. Hebrew and Greek

alike saw plants and animals grow to maturity and die, and their places taken by other plants and animals exactly like them. Figs were never known to grow on thorns, nor thistles on grapes. The cattle on a thousand hills always remained cattle. Fish were never known to change into frogs, nor reptiles into birds. That subtle, intangible, impalpable thing, the soul, might pass from animal to animal—many primitive peoples were quite sure it did—but no man among them ever knew or heard of a plant changing into an animal, or an insect into a bird. Every plant and animal had produced seed after his kind, as far back as history and legend had brought them knowledge of the past. Each species was believed to be as fixed and immutable as the everlasting hills. Such was the view of ancient peoples, such at least was the view of Aristotle, and such was the view held during all the centuries of the middle ages, when Christianity was struggling to give light and order to the barbarians of Europe.

Physics, geology and astronomy all sprang into new life in the seventeenth century. Newton in England and Leibnitz (1680) in Germany became famous by their original work in mathematics and physics. The latter proposed the geological theory, bold and startling at the time, that the earth was originally in a molten state from heat, and that the primary rocks had been formed by the cooling of the surface of the liquid planet. Researches in physics gave birth to a new science—chemistry. What more natural than that biology should share in the common awakening! The known facts of organic life had increased enormously, and a close study of them proved irreconcilable with the superficial notions of previous centuries. The five hundred animals described and classified by Aristotle had by this time increased to thousands. Robinet and De Maillet declined to believe that apparently distinct animals and plants had been separately created, and had come down to us from the creation unchanged.

The theory of the special creation of species presented insurmountable difficulties to the student of practical botany and zoology. In the first place it did not explain how many species shade into one another—apparent gulfs being bridged by an almost infinite number of variations. And in the second place, it did not explain the resemblances in structure that exist throughout the great natural divisions of the animal and vegetable kingdoms.

A child can distinguish a horse from a sheep or an oak from a daisy. The differences are so marked that there is no room for controversy. But this is not the case when we examine individual members of great families, say pigeons, tigers, or rose trees. In these cases and thousands of others, one species passes imperceptibly into another until no two experts can agree as to what constitutes a species. For example, some botanists enumerate about sixteen species in the order rosaceæ, and other authorities make as many as thirty. The same thing is true of species belonging to the gooseberry order. Which is correct? In both cases it is clear that the distinction is a mere matter of expert opinion.

But systemists were met with the other practical difficulty. While the differences between species seemed so minute and trifling as to almost cease to be differences, the resemblances were even more striking. The blood, flesh, and the bones of fish, frogs, reptiles, birds and mammals were found to be almost identical. Of course there were variations—plenty of them, but the resemblances were so marked that every one could see that all were constructed on the same general plan. The wings of birds and the breast or pectoral fins of fish were simply the forelegs of a horse or cow, and so on. In fact so strongly did the similarity of structure impress Erasmus Darwin and Lamarck that they each proposed a crude form of the theory which fifty years later made Charles Darwin so famous. According to this theory a few animals were originally created and in process of time these became variously modified and gave rise to the wealth and infinite variety of life known to the naturalists of the eighteenth century.

This theory however was not satisfactory. It merely shifted the difficulty of explaining the origin of species to the equally great difficulty of explaining the origin of the simple forms, and of how these simple forms had developed into the higher and more complex ones. Its most distinguished and determined opponent was Cuvier who declared that "a system resting on such foundations may amuse the imagination of a poet, but it cannot for a moment bear the examination of anyone who has dissected the hand, the viscera, or even a feather".

Description and classification however still went on. Gold diggers were never more ardent than these species hunters.

Their enthusiasm was kept alive and their labors rewarded by the discovery of new species. Even forty years ago scientific Europe was almost wholly given up to the idolatry of species hunting, and two years ago I met an American naturalist who was unearthing new species of leeches at the rate of two or three a week. So completely have aims and methods changed, that the biologist who would now-a-days devote himself exclusively to description and classification, would be looked upon as a sort of scientific Rip Van Winkle. The race of species-mongers—men who imagine that scientific investigation consists in catching animals and ticketing them—is almost extinct.

Of course no sane man thinks of belittling the work of pioneers. The work of the seventeenth century systematists was as necessary a step in the progress of biology as clearing the forest before cultivating the soil. But their observations were made exclusively on the external forms. Their analysis of structure went no deeper than that of the Yankee who described vertebrates as made up of "flesh and bones", and insects as "composed of skin and squash". How external their classification was, may be best understood from a single fact; it was gravely proposed to place crocodiles and beetles in the same class, because both are encased in hard shells!

But while trying to appreciate the labors of Linnæus, Hooker and such men, we must not shut our eyes to their defects. Classification and description is work not brimful of ideas, but in the case of the eighteenth century naturalists, it was work that paved the way to better things. Under Cuvier and his school animals were carefully dissected, chiefly with a view to a better understanding of their relationships, and in this way it was discovered, or rather rediscovered, that animals are made up of organs—organs of locomotion, organs of respiration, organs of nutrition, of sensation, of circulation.

In 1801 Bichat took another important step. He proved that the organs which Cuvier had dissected out and described could be further resolved into tissues. Every part of every known animal was shewn to consist of one or more varieties of four elementary tissues, bone, muscle, nerve and epithelium (including skin, mucous membrane, &c.) In varying proportions these tissues built up every organ in an animal's body—skin, lungs, tendon,

arteries, veins, fat, flesh, no matter what the animal—all were made up of these elementary tissues.

But perhaps the most important discovery of all was made in 1838-9. Calling in the aid of the microscope, Schwann and Schleiden, two German naturalists, analysed the elementary tissues of Bichat and showed that these consisted of very small rounded particles which they called cells, and that these cells all contained at some time in their development, the living stuff of life or protoplasm.

Almost side by side with this exhaustive analysis of animal life went on that of plant life and with precisely similar results. The conclusion was irresistible; plants also were composed of organs, and those organs were made up of tissues; tissues were composed of cells, and all vegetable cells except the old ones contained protoplasm.

Embryology added its quota of difficulties to accepting the doctrine of the special creation and immutability of species. What is the meaning of the gills in birds, reptiles and mammals—gills that appear in the prenatal state for a little while and then vanish away? Why have young whalebone whales, parrots and turtles teeth which they never use and which disappear as they grow older? Even man was found to have some sixty or seventy rudimentary little structures. His body was a perfect museum of relics.

Geology too added its share of difficulties. The record of the rocks shewed abundantly that backboneless animals had been the first inhabitants of the earth, that fish had existed before amphibians, these before reptiles, and reptiles before birds.

The mass of facts thus accumulated from comparative anatomy, embryology and geology, the vast increase in the number of known species and their palpable relationships, forced naturalists to consider anew the problem of the origin of species. Bates tells us that this problem was never out of his mind a day for five years. Owen described the "all pervading similitude of structure between man and the highest monkeys." Biology was awaiting a man possessing the genius of a Plato, a Copernicus or a Newton and that man was Charles Darwin. In estimating his work, we must be on our guard against supposing that there was anything unexpected or revolutionary in the theory which he pro-

posed. The scientific world was ready for a new theory of the origin of species. We know well that if Darwin had not proposed the theory of organic evolution by natural selection, Alfred Russel Wallace would have done so. The time was awaiting the man; the man could no more have produced his theory in the eighteenth century than Milton could have written *Paradise Lost* in the tenth. Darwin's work grew from the work that preceded his, as naturally as leaves grow from buds or men from boys.

There have been no cataclysms in the evolution of thought any more than in geology. The thought of to-day grew out of that of yesterday, the thought of to-morrow grows out of that of to-day. In the same way there have been no cataclysms in organic evolution. "The animal world as it exists to-day is naturally developed out of the animal world as it existed yesterday, and will in turn develop into the animal world as it shall exist to-morrow." No matter what moment you select in the past history of life, at that moment the life that preceded it was insensibly and imperceptibly (to the superficial observer) passing into the life that followed. Continuity and change are the central ideas in the doctrine of evolution.

Biologists believe that life is a unity; that plants and animals had a common origin; that they separated in ages long long by-gone; that the simplest ones existed first, and slowly, almost imperceptibly developed into higher and more complex ones, until finally the highest plants and animals as we know them, came into existence. No breaks, no cataclysms, but a *continuous creation*, one that is not even now complete.

According to this view there is no such thing as species. The term therefore is little more now-a-days than a convenient one to express the fact that smaller or larger groups of animals and plants closely resemble each other; and specific names are valuable only in so far as they enable workers in different parts of the world to recognize the particular forms on which biologists may be doing original work.

No sooner is one question settled in science than it suggests half a hundred others. The question of the origin of species being settled, biologists have since then been investigating the causes, prominent in producing these variations in animals which

subsequently grew into specific differences. Darwin spoke of variations being fortuitous, indefinite, spontaneous ; and frankly confessed his inability to explain their origin. Many causes have been suggested, but amidst the clamour of conflicting theories, it is easy to see that there are only three main factors in the problem. The variations in animals which afterwards grew into species must have arisen, (1) either from the activities (functions) of animals, or (2) from their environment ; or (3) from their inheritance or constitution : function, environment, heredity, the three inexorable fates of this century.

That the activities of animals produce a change of structure is evident. Advocates of this factor in evolution are known as neo-Lamarckians. They point out that a blacksmith's arm enlarges and grows stronger by hammering ; that the fingers of silk sorters possess great delicacy of touch through grading silk cocoons : that many life-long students are round shouldered through stooping over a table ; that swift swimming fish are torpedo like in shape through rapid motion in water ; that horns have been developed by butting ; and hoofs by running on hard ground ; that burrowing animals and cave fish are blind through not using their eyes ; that the webbed feet of swimming birds have been developed by swimming ; the long tongue of woodpeckers from inserting it in holes and hunting for worms, and a thousand other facts of a similar kind. The variations thus originating in animals are, they claim, transmitted, and accumulating in the offspring, give rise, in course of ages to newer and newer species, until finally we see how the whole animal kingdom has grown into existence and perfection.

That an animal is profoundly influenced by its environment is abundantly proved by experiment. Schmankewitsch placed one species of salt water shrimp in water of greater and greater saltiness, and in the course of generations changed it into an animal that had previously been regarded as belonging to a distinct species. Moreover he reversed the process, and by freshening the water little by little, again obtained the change of species. He even accustomed these animals to live in fresh water with still further changes in external form. Dallinger by carefully conducted experiments accustomed monads (infusors) to live in water at a temperature of 158° F. instead of 68° F. The quantity and

quality of the food determines whether a bee-grub shall develop into a queen bee or a worker. The cold winter changes the fur of our rabbit from brown to white. Reflected light changes the color of caterpillar, pupae and fish. And thus do we see how heat and cold, moisture and drought, sun and shade, food and famine, the play of wind or the rush of torrent, the flash of lightning and the clash of the elements profoundly modify the form and future of animals.

That there are variations which are hereditary or due to the constitution of animals is patent. Not only are peculiar features, gait and mental traits reproduced in children, but weakness and malformations. Color-blindness has been known to exist in six successive generations, and that among the men only; deaf-mutes in three successive generations; finger-malformations in six; and so on with cleft palate, harelip, and tendencies to consumption, cancer, gout, rheumatism, bleeding, and a list of diseases long and grim.

Sometimes the variation is one that reveals the characters of grandfather or other progenitor. A lizard in growing a new tail has been known to grow one with scales on it like those of his remote ancestors. A horse occasionally exhibits stripes like those of his wild ancestry; a blue pigeon, a reversion to the wild pigeon type, is occasionally hatched out in a pure breed; or a cultivated flower sometimes degrades to its wild prototype. Children born during a famine show similar reversions, and the records of our institution for the criminal and insane prove that some variations are constitutional, congenital or hereditary.

Nor must we suppose that heredity is peculiarly an animal characteristic. Scant nutrition has been proved to influence the flowers of the poppy, nettle and carrot, and the result has been transmitted. Cereals removed from the Scandinavian plains and planted on the mountain side slowly became accustomed to grow more rapidly and at a lower temperature in their new habitat, and when returned to their native plains retained this acquired character.

It is clear then that function environment and heredity are the three prime factors in the evolution of species.

Every important conclusion in biology has a practical and therefore social and ethical aspect. Biology is the foundation of

medicine and especially of hygiene and sanitary science. Surely it is of vital importance to a community to know that contagious diseases are due to animal or plant organisms getting into the human body ; that certain activities are productive of disease and may be transmitted to an imbecile offspring: and that marriage into an insane or criminal family should be shunned as with a leper. And, in the higher domain of social life, in which the deepest problems of heredity are called up, it is of supreme importance to know that a gifted lineage is verifiable for generations; that crime, insanity and moral weakness may be transmitted ; that environment, whether it be of the pesthouse or of the mansion, or of mountain, stream and valley, slowly but inevitably moulds the bodies and souls of the young. When the community knows these things, we may expect to find every man and woman with a beautiful soul shining out from a healthy body, and not as now, when we have political liberty among the slums of White-chapel, fraternity in the lazaretto of the tramp, and equality among a community of weaklings.

A. P. KNIGHT.

FABLES FROM LESSING.

1.

"Sing then, sweet bird!", cried a shepherd to the nightingale that was sitting silent one fine evening in spring.

"Alas!" said the nightingale, "the frogs are making such a noise that I don't in the least care about singing. You hear them, do you not?"

"I do indeed hear them," replied the shepherd. "But it is because you are silent that I hear them."

2.

The furious North wind had proved his strength one stormy night on a lofty oak. There it lay all its length, a crowd of humbler growths crushed beneath it. A fox came forth from his hole near by and saw it lying. "What a tree that is!" he cried. "I had no idea it was so tall."

THE SCHOOL OF MINING AND "MINERS."

THE Governors of the School of Mining and Agriculture have succeeded in opening one side of their new School, and have promised to begin the other side, whenever the Municipality of Kingston gives them the aid, either in the form of bonus or land, which it is evident they must get, before they can ask anything from other municipalities, with the slightest prospect of success. As the new School is to be affiliated to the University, we are doubly interested in its welfare and wish it a rapid and extensive development. The Governors are acting wisely in not confining it to the limited class of students who are able to take the four years' course that leads to the degree of Mining Engineer. They have already established special courses of instruction, beginning January 9th, 1894, for mine foremen, assayers, prospectors and other intelligent classes of persons interested in mining. These Courses are to include Chemistry, accompanied by laboratory practice, Mineralogy, accompanied by practice in identifying minerals by field tests, Geology and ore deposits, with illustrations from the Geology of Ontario, Lithology, special attention being given to the crystalline rocks of Ontario, and the Discovery and Winning of Ores, Blow-piping, Assaying and Drawing; while those who are prepared for advanced work may attend lectures on the Chemistry of fuels, ores, fluxes and furnaces. Every facility will be given for work in the Chemical, Mineralogical, Petrographical and Assay Laboratories. The fee charged for these Courses is only ten dollars, or scarcely more than enough to cover the special expenses incurred. The Governors of the School have leased the John Carruthers Hall, until some one who has made money by mining, or hopes to make it, gives them enough money to erect a building of their own. Until this step is taken, the institution can hardly be said to have taken root, though it is most fortunate that they were able to secure a build-

ing which is a model of its kind, so far as the work required by a School of Mining is concerned.

At the public opening of the new School, excellent addresses were delivered by the Vice-Chairman, Hiram Calvin, M.P., Dr. Williamson, Principal Grant, Ex-Mayors John McKelvey and D. M. McIntyre, M.A., and by three members of the staff, Messrs. W. Nicol, Willet G. Miller, and Wm. Hamilton Merritt. The addresses of Professor Nicol and Mr. Miller have been given in full in the *Journal*. That part of Mr. Merritt's address which deals with the course of education that is covered by the degree of Mining Engineer will be of interest to our readers, as some of them doubtless intend their sons for that or the kindred profession of Civil or Electrical or Mechanical Engineer. Queen's, we understand, intends to announce a course for Civil Engineering in the next Calendar, now that all the necessary instructors are in her own Faculty or in the Faculty of the new school. Every year, some of our students have reluctantly left, to go either to Montreal or Toronto, to take the Civil Engineering course. That will be no longer necessary.

We hope that the Governors will be able to open some departments of the School of Agriculture before very long, for instance, Dairying and Veterinary. As to the former, the demand for scientific instruction already exceeds the accommodation at Guelph; and as to the latter, it is our conviction that a farmer who does not know how to treat the diseases of his cattle and horses is not fit for his calling. Far from being desirous of isolating the University from these subjects that concern the ordinary life of the great body of our people, it is matter for gratification that a school for their scientific treatment is being established in Kingston, and we feel assured that every friend of the University will do his utmost to ensure its success. Some have done so already by subscribing a great part of the money that was needed to start it, and this is only an earnest of what may be expected in the future, as the School proves its usefulness.

MAN. ED.

MINERS.

I use the term "Miners", not so much in the sense of the man who labours in the face of a working and gets out ore or coal at so much a ton, but to designate a "Mining Engineer". We, when students at the Royal School of Mines, were always proud so to call ourselves; and, on the football field as well as at our studies, "Miners" was our battle cry.

Let me congratulate the Board of Governors on having decided to create this Institution as a separate School. I believe your decision will eventually cause it to pass in front of those branches of the Universities of McGill and Toronto which enable students to qualify in subjects essential to Mining Engineering. The *esprit de corps*, which draws together and inspires students at a School of Mines, as "Miners", will not be found to exist to the same extent in a branch of a University, and as nothing succeeds like success I look forward to the day when the Kingston School of Mines will have absorbed the best scientific material in the country.

Every class with kindred interests is drawn together, but of all sorts and conditions of men none are so closely banded together in mutual self-interest as the mining community. We know that nothing brings men together like danger, or the appearance of danger, and next to that of actual warfare I know of no occupation where negligence or foolhardiness meets more surely with the summary punishment of loss of life or limb than the occupation of mining. Custom of course reconciles one to anything, but the peculiar and somewhat gruesome surroundings attached to the labyrinth of underground passages and caverns, which go to make up a developed mine, never quite pass away, and these influences, accompanied oftentimes by feats of daring to stem a pending disaster, or by deeds of self-sacrifice to rescue fellow-comrades entombed alive, all tend to bind together the workers in the regions of underground darkness by bonds stronger than steel and pure as gold.

What then is a Mining Engineer? Some people labor under the impression that he is a person who runs a steam engine under ground; others that he sustains life by breaking rocks in inaccessible places, and I once heard a gentleman occupying a prominent position as a geologist in this country state that you could get any number of Mining Engineers anywhere, but that a man who would sketch fossils was indeed a *rara avis*. Of course there are mining engineers and mining engineers, as there are geologists and geologists.

If you glance at our curriculum you will see what studies a properly qualified "Miner" is supposed to have mastered.

First of all, he must master the principles of chemistry, in order that he may understand the composition of minerals and ores, and the reactions which take place during metallurgical operations. He will be required to have made qualitative and quantitative analyses to be able to determine the composition of minerals, ores and metallurgical products.

Next he must have studied physics and mechanics, in order that he may know the laws of light, heat, sound, magnetism and electricity, and appreciate the forces connected with the various classes of machinery which play so important a part in his subsequent operations; and of course to master this, a thorough foundation in mathematics, and a knowledge of mechanical drawing will have been necessary.

Then, the study of mineralogy is essential, in order that the crystalline form, color, hardness and specific gravity of mineral substances may be mastered and that any of them can be recognized when seen.

Then, every mining engineer must be a geologist, and be familiar with the principles of petrology, geognosy, including paleontology, stratigraphical geology and a certain amount of geological surveying, in order that he may recognize the structural form of the earth's surface, with which he will have so much to do.

After an acquaintance with the composition of the minerals going to make up rocks and ores (mineralogy) and some of the infinite variety of forms and conditions in which these rocks occur (geology), the next step is

THE SCIENCE OF MINING,

under which are studied the various kinds of deposits of economic minerals, the modes of prospecting for them, the usual plans of opening them up, and extracting them from their resting places in the surface of the earth, and the systems of mechanically separating that part which is of value from accompanying rock-matter which is of no value. In connection with this a full knowledge of the machinery in use, both above and below ground, for these purposes is necessary, as well as the capability of making surveys, calculations and plottings to show the underground workings and their connection with the surface.

Then, lastly, every competent mining engineer must be acquainted with the methods in vogue for treating the various kinds of ores whereby the metals which they contain are extracted. This is the science of metallurgy, and naturally follows the science of mining.

The above are the subjects essential to a thoroughly competent mining engineer and which are provided for in our course. As an example of the work which falls to the lot of graduates of a mining school, I might mention the names of the only two gentlemen in Canada who, besides myself, took the mining associateship at the Royal School of Mines in London. The senior is Mr. Henry S. Poole, who manages the large Acadia colliery in Nova Scotia, and the other is Dr. G. M. Dawson, C.M.G., one of the assistant directors of the geological survey, and almost as well known in the scientific world as his learned father.

There is room for legitimate mining development in Canada. Our neighbor to the south extracted, in 1891, minerals and metals of the value of \$666,105,837, largely from similar geological formations to our own. Our production for the same year was but \$18,500,000, or only 1-36th !

WM. HAMILTON MERRITT.

SOME NEW BOOKS IN POLITICAL SCIENCE.

Principles of Political Economy, Vol. I. By Prof. J. Shield Nicholson, of the University of Edinburgh. Macmillan & Co., London and New York.

AFTER rising from a survey of this book the general impression which is left with us is that the work is eminently sensible. Here is a work in which political economy is treated in that large and rational spirit best described as philosophical, and yet in which the speculative element is never allowed to run at large, but is kept well in touch with the practical basis and special limitations of the actual economic life of the people.

Too many modern writers on economics, in the vain attempt to give to their study the exactness of the physical sciences, have turned too much attention in their construction of laws and definitions upon the physical elements in wealth, and have thus lost sight of the peculiarly human basis on which the whole study rests. Even when we seem to be dealing with purely scientific matters, as for instance in the law of diminishing returns, the whole economic importance of the facts rests upon the relation of physical nature to the supply of human wants. The law of diminishing returns in agriculture would be just as true and important from the scientific point of view, after we had discovered a chemical process by which starch could be manufactured directly and cheaply from the raw materials of the earth as before the discovery, yet after the discovery the economic significance of the law would be almost completely lost. Considering the supply of wants as the all-important element in political economy, without however passing judgment on the moral or social quality of these wants, the physical laws and properties of nature become very important in a secondary sense, for on these depend directly or indirectly, as helps or hindrances, the means for satisfying wants. But human wants, especially the higher ones, are subject to constant variations both as regards individuals and as regards classes or groups. These variations are due to changing economic, social or political conditions which tend to create new wants, to modify or stimulate old ones and to increase or decrease the possibility of supplying the wants. These and many other conditions which are constantly affecting human needs introduce great differences in the means of satisfying them and the relative de-

mands made on the means. From these considerations it follows that, if we are to expect any adequate service from economic laws and principles, we must look to the supply of wants as our basis of definition and distinction more than to the nature of that which supplies them. Further, the fundamental laws and definitions of economics must be flexible, in other words they must be capable of keeping in touch with the progressive satisfaction of wants, but this is impossible if they are determined with reference to the articles of wealth themselves rather than to the uses of them. All these conditions are thoroughly recognized in Professor Nicholson's treatment of the fundamental principles of economics. Thus he secures clearness, serviceableness and adequacy in his definitions and laws and avoids those confusing cross divisions, vague and ragged definitions, arbitrary classifications and laws whose breaches are more numerous than their observances which are found in one or two recent works on economics. Thus if we take Professor Nicholson's definitions of general utility, wealth, capital, and their relations to each other, we find that general utility refers to the widest and most general satisfaction of human wants. Again, the means for this general satisfaction may be distinguished as either the inner personal qualities of man or the outward qualities of the world in which he lives. Further the outward non-personal means for the satisfaction of wants are either practically unlimited, supplied without labour and thus free to all, or they are limited, appropriated, exchangeable and require labour to fit them for use. These latter means for the supply of wants so defined give us at once the proper subject matter of economics. These economic means divide naturally into those which are appropriated for immediate use in the supply of wants and those which are devoted to the production of further means for the supply of wants; the first being ordinary wealth or income and the latter productive wealth or capital.

These definitions are simple, flexible, natural, and adequate, and thus give an easy and sure command over the subject matter in all the subsequent detailed treatment of it.

In a subject like economics, where each author is practically free to make his own divisions and corresponding definitions, the question is hardly one of being right or wrong, but of being rational or irrational wise or unwise, sensible or ridiculous.

The present volume deals only with the production and distribution of wealth, following in the manner of treatment mainly in the lines of Mill. Still in the detailed treatment there is much that is new and

interesting while many of the illustrations used and special facts cited are strikingly appropriate and up to date.

The chapters on Custom and Village Communities, Feudalism, Modern Ownership of Land and Industrial Freedom, Contracts for the Hire of Land, Economic History and Economic Utopias introduce matters, some of them ancient others quite modern, which are not usually included in a general discussion of economic principles but which are quite appropriate in a work framed on the liberal lines of the present one.

The general style and atmosphere of the work suggest culture, insight, wide and varied information together with a strong current of humour which is always a saving grace in the treatment of a subject like economics.

The United States. An Outline of Political History, 1492-1871. By Goldwin Smith, D. C. L. MacMillan & Co., London and New York.

The issue of a third edition of this work gives us license to add our somewhat belated opinion of the book to the many others which have already appeared on both sides of the Atlantic.

The very fact that a third edition has been called for so soon shows that the work has become interesting to a very large class of readers. When we look into the book itself we find that the appreciation is well founded. It convinces us, too, that there must be in America a widely diffused and intelligent interest in historical studies when suitably presented. That this interest does not more often manifest its strength and extent is perhaps the fault of the writers of history rather than of its readers. Apart from those who are special students of history, the readers of historical works are business and professional men whose time is for the most part well occupied. Two conditions are indispensable in a work which is to attract and hold the attention of these men—the ideas must be presented within reasonable limits and the presentation must be clear and to the point. These conditions Mr. Smith has well fulfilled. But he has done more, for he has exhibited many of those ideal qualities of the historian which will make his book interesting to the student of history as well as to the intelligent citizen. He has displayed an admirable sense of the historical perspective, bringing out the true proportions which the facts of history bear to each other when looked at from the universal point of view. Many facts and groups of facts which have

made a great swagger in their own day and generation, even to the deceiving of the elect, appear quite unimportant when seen in their proper relation to the great movements of historic development ; while with other facts the reverse is the case. This adjustment of historic values is admirably done by Mr. Smith. Again every country has its own historic idols which though but common wood and stone to other nations, yet body forth to their own people a great range of ideal elements of which they have become the symbols. This ideal element is properly no part of the actual historic facts and personages which afterwards become their symbols, but as symbolic the facts and personages become historic in their new form and cannot be disregarded. In their own country they are not likely to be disregarded. On the contrary the real is almost invariably lost in the symbolic. It is one of the merits of Mr. Smith's book to have reduced many of these symbols to their original historic dimensions, a dividing of bone and marrow which probably no American could have so well accomplished. But in this process the symbolic or ideal element has largely vanished and is nowhere else adequately presented, though it is none the less real and effective in the nation's history. The inadequate recognition of this peculiarly national element is perhaps the chief defect in Mr. Smith's book ; and the same applies to his book on Canada and the Canadian Question. To specify more closely let us take for example his admirable sketches of such men as Adams, Jefferson, Washington and Webster. In these we have a presentation of the actual historical characters in their true relation to the development of their country. But while we recognise the presentation as essentially complete in the case of Washington and Webster, we feel that there is something incomplete about Adams and Jefferson, and when we look more closely, we perceive it to be precisely the symbolic element which later generations of American writers and orators have attached to these names. Thus, while Washington and Webster now occupy a position of *otium cum dignitate* in the gallery of the nation's great historic characters, Adams and Jefferson are still active politicians labouring in the service of their country or their country's parties, and their later influence and achievements are no more to be disregarded than their earlier life in the flesh.

The war of 1812-15 is an event which may be taken as typical of this double significance, only the actual facts of which are fully appreciated by Mr. Smith. In the case of the war for the union we see the process of idealization going on, and in a few generations it will no doubt be better known by the ideas which began to take root after

it, than by the ideas which gave rise to it or governed its progress

As Canadians we are interested in some of Mr. Smith's remarks about the colonial period. He considers that the political tie which bound the first colonies to the mother country was the cause of many difficulties, among others of those which culminated in the violent separation of the colonies from England with all the bitterness to which the separation gave rise. With this idea we thoroughly agree, without, at the same time, being able to conceive of any other relation being established under the prevailing ideas of the age. It was this system of political dependence and paternal direction faithfully carried out which was the bane of the Spanish and French colonies of America, while it was the systematic political neglect of her colonies by Britain which permitted their rapid, substantial and natural development. When the neglect was sought to be remedied by George III and his ministers the inevitable result followed, the greatest evil of which has been the division of the Anglo Saxon element on this continent into two political bodies with a most unnatural geographical boundary between them.

Mr. Smith does ample justice to Britain in her relations with the United States. This, with the frank and honest way in which it is done, is pleasing to us in several ways. It is highly necessary that justice should be done to Britain in the United States where, as a consequence of that original breaking of the political tie, a false conception of her has long prevailed even with a good portion of the educated class. But the reception which the book has met with is a good indication of the decay of the anti-British feeling among the educated class. Finally this book is an indirect, and on that account very conclusive refutation of the accusation commonly brought against Mr. Smith in one form or another in this country, that he is not a loyal and true Englishman, but is at heart opposed to the interests of England and Canada.

An Introduction to the Study of Political Economy. By Prof. Luigi Cossa. Translated by Louis Dyer. Macmillan & Co., London and New York.

We are pleased to see this interesting and useful work appear in a new and enlarged form. Still, some of the changes and additions which have been introduced do not commend themselves as improvements. In the first place, the change of name is unfortunate. In its former shape the book was called "a Guide to the Study of Political Econ-

omy", a name which admirably expresses the real scope and usefulness of the work. In this new edition the historical part is preceded by a theoretical part which seems to be mainly responsible for the change of name. This, however is not at all suitable as an introduction to the study of Political Economy, nor has it any natural connection with the historical part of the book.

The historical portion, which constitutes the body of the book, is admirable in quality and remarkably complete in range. It presents in the line of historical development, a very complete yet condensed sketch of the various writings, and opinions bearing on economic questions from the earliest times down to the period of Adam Smith and his immediate followers. After this period the writers are grouped with reference to the leading civilized countries. So far as personal acquaintance with the general literature of Political Economy enables us to speak, the reviews and summaries of the various works appear accurate and sympathetic. If the author errs on any side it is perhaps in being too lavish of his praise, and in tending to crowd uncomfortably the first rank of economists. The work is essentially one for reference rather than for class study. Its size, form and copious indexes, make it an admirable work of reference for the college student, as well as for the intelligent citizen who wishes to know what the leading economists of the world have been writing, or where he can get the best information or instruction in any special line of economic investigation in which he is interested.

A. SHORTT.

BOOK REVIEWS.

The Old Testament and Its Contents. By Professor Robertson, D. D., University of Glasgow.

FEW men in Great Britain are as familiar as Dr. Robertson with the original sources of information in reference to the Old Testament. On first thoughts one might suppose that to write a satisfactory text-book on the Old Testament for "Guilds and Bible Classes" would not require the learning of so erudite a scholar as the Glasgow Professor of Hebrew. It must, however, be an immense comfort to those who read this book to know that its

author is not a mere compiler, but has a first hand acquaintance with the subject of which he treats. While never making any useless parade of learning or encumbering his pages with any unnecessary names and dates, he has embodied in this small volume the results of very profound study and very wide reading. His book can be strongly recommended for the accuracy of its statements, its fairness in dealing with disputed points, and its admirable adaptation to the wants of those for whom it is chiefly intended.

J. B. M.

The New Testament and its Writers. By Rev. J. A. McClymont, B.D. A. and C. Black, London, 1893.

The interest in questions introductory to the study of the New Testament was formerly confined chiefly to scholars, but is now shared with them, by many who claim simply to be well informed. The intelligent layman as well as the theologian considers it necessary to acquaint himself with the latest results of inquiry into the origin of the Synoptic Gospels, their genetic relation, or their independent composition, the authorship and date of the fourth gospel and of some of the Epistles ascribed to Paul, as well as the aim which the various writers had in view. The demand for such information has called forth within the last few years, several works which treat these subjects in an attractive way. The volume before us is the latest and perhaps the best for the general reader. The author states in the preface that it was originally one of the series of Guild and Bible-class Text-books issued by the Life and Work Committee of the Church of Scotland, of which Professor Charteris is the Convener. Its favorable reception led him to issue it in its present popular form. He treats the questions under consideration with great fairness and breadth of view, and brings to their elucidation the very latest results of research. The footnotes which occupy considerable space give valuable information and references, as well as Scripture quotations which will be found convenient. The book contains a map of Palestine and the countries through which Paul made his missionary journeys, and also beautifully executed fac-similes of the text of four of the most ancient Greek manuscripts of the New Testament, and of two of the earliest versions, the Old Latin and the Syriac. It deserves to have a wide circulation,

D. R.

The Unrivalled History of the World in five Volumes. By Israel Smith Clare; Chicago, The Werner Company; Toronto, Daniel T. McAinsh, 1893.

In the present mode of writing history where an author confines himself to a particular period, as in English history Freeman takes up the Norman conquest, Froude the Tudor period, and Gardiner the reigns of the earlier Stuarts, it seems a work too great for any one writer to attempt the whole history of a nation, and still more a universal history; yet the author of the volumes before us has made the attempt with very good success. This history is not to be classed with such a work as Ranke's Universal History, but as a simple narrative of events told in a simple style it well deserves the attention of the general reader of history. The author has not studied the original authorities, and not always the latest, but in so wide a field this was perhaps scarcely possible. In the history of Egypt, and of the earlier Eastern nations, he has accepted Bishop Usher's chronology, which now however is regarded as valueless; nevertheless the sequence and connection of events is well brought out. Opening the fourth volume, which covers the 15th, 16th and 17th centuries, we casually turn to the period of the Thirty Years' War, and read the following summing up of the effects of the Peace of Westphalia.

"Amid the general joy which hailed the conclusion of peace neither party in Germany was satisfied with the treaty of Westphalia. The Protestants felt that they had not received the rights to which they were entitled, and the Catholics denounced the treaty because it conceded too much to the Protestants.

Pope Innocent X denounced the Treaty of Westphalia as 'null, invalid, iniquitous, and void of all power and effect.' The remarkable change in human thought marked and declared by this treaty concerned His Holiness more nearly than any other European sovereign, except the Emperors. By conferring full civil rights upon persons who were enemies and aliens to the Roman Catholic Church, this celebrated treaty abrogated the entire theory by which the Empire and Papacy had existed for eight and a half centuries. But this theory had been slowly vanishing so that the treaty only announced a change already accomplished."

This is a fair sample of the form of the work, and it will be noticed that there is a simplicity and directness of style, a clear judgement, and generally a true estimate of the importance of events. The writer evidently sees the bearing of events, and brings out the more important with distinctness,

In any reproduction of this work we would recommend a change of title ; the claim of "unrivalled" is calculated rather to repel than attract readers.

History of Canada. By William Kingsford LL. D., F.R.S. (Can.) Vol. VI.

Dr. Kingsford's *History of Canada* has reached the 6th volume, and is still marked by the same features as characterized the earlier volumes. Dr. Kingsford's pen may not be so facile as Parkman's, but certainly the narrative is distinguished by even greater exactness, all authorities have been carefully consulted, and excellent judgement is shown in the use of the materials. This volume covers a period of only three years, from 1776 to 1779. It begins with Montgomery's appearance before Quebec, and it naturally reviews the course of contemporary events in the War of Independence. The invasion of Canada by the army of Congress was ill-advised, and failed. Congress had misjudged the feelings of the French Canadians towards Great Britain and expected that on the invasion of Canada the *Habitants* would have required little persuasion to join the army. Very few however were seduced from their allegiance, and the army in advancing from Montreal to Quebec was passing through a country, which was far from friendly, while it was moving further from the base of its supplies, and it must have been evident, almost from the first, that the invasion would prove a failure. But no more striking testimony could have been given of the satisfaction of the French inhabitants with the terms of the Quebec Act of 1763 than this firm allegiance to Great Britain ; an allegiance which, with one or two exceptions, they have ever since shown.

But if the invasion of the army of Congress was ill-advised, not less ill-advised was General Burgoyne's advance to Fort Edward, on the Upper Hudson, and which resulted in his surrender of himself and his army to Gates.

Dr. Kingsford marks very clearly the judicious and careful conduct of Sir Guy Carleton, who was still the Governor of Canada, not only in regard to the retreat of Arnold, who took command of the army after Montgomery's death, but also in his advice to Burgoyne, which, however that General did not accept.

It was largely due to Sir Guy Carleton's influence that the Quebec Act was passed, and his dealings with the French inhabitants was always marked by the same kindly consideration and confidence.

Our author is very just in his estimate of the leading characters

that call for notice. We look forward with pleasant anticipations to the appearing of Dr. Kingsford's volumes, as we are indebted to him for the ablest history of Canada that has yet appeared, and his work must be the great storehouse from which later historians may largely draw their materials.

We hope in a succeeding number of this Quarterly to give a more extended notice of this valuable history.

Die Begründung des Deutschen Reichs durch Wilhelm I. von Heinrich von Sybel.

This is one of the most important contributions that has appeared for a long time. Its purpose is to trace the growing ascendancy of Prussia among the German states, with the ultimate transference of supreme power from Austria. As the author says in his preface, "The war of 1866 was no mere product of personal passions; it arose from the inevitable conflict between rights which had grown up in the course of centuries, and the increasing pressure of national needs. This unhealthy state of things at last became intolerable, and nothing but a violent crisis could effect a permanent remedy. It is fortunate for Germany that the remedy has been found. The combatants of 1866 are now not merely reconciled, but they are united in a firmer bond of union than at any former period. The days of the old Diets are past, and have become merely a matter of history. Of Koniggratz we can speak as calmly as of Kollin and Leuthen." The Thirty Years War brought about a marked separation between North and South Germany. The Northern States had become protestant, and the bond of religion as well as the tendency of trade to the Baltic and North Seas united them more closely together. On the other hand the sympathies and interests of Austria as well as of Bavaria lay more with Italy and the Papacy. Austria naturally looked for any extension of territory either towards the lower Danube, and the Balkan peninsula, or to the north shore of the Adriatic, and to the neighbouring lands of Italy.

The seven years war not merely extended the Prussian territories, but secured the House of Hohenzollern on the Prussian throne; the old Duchy of Brandenburg had become a kingdom, but before Frederick's army defeated the troops of Maria Theresa, and drove them out of Bohemia and Silesia that throne was not secure, but now Prussia stood on an equality with her southern rival.

Austria received a still greater injury when after the battle of Austerlitz Napoleon entered Vienna, and chasing the Emperor Francis from his capital, he cast to the ground the old Imperial crown, and brought to an

end the Holy Roman Empire. In the subsequent struggle for independence from the Napoleonic yoke it was Prussia that took the prominent part. It was her statesman Stein and Sharnhorst who sought to inspire the German States with a new life, and succeeded in rousing them to united action. The part which Prussia took in that movement increased her power, and her prestige in the eyes of all Europe.

In the treaty of Vienna the position of Prussia was fully recognized. That treaty is a most important turning point in the history of Germany. Through it Prussia acquired besides Posen and Upper Pomerania, half of Saxony, with the Palatinate of the Rhine and Westphalia. This extension of Prussian territory constituted Prussia the guardian of North Germany against France on the one side, and Russia on the other. Austria on her part relinquished the portions of territory which she held within Bavaria and Belgium, and gratified her southern inclinations by adding to her dominions Venice and part of Lombardy, and assuming a protectorate over Tuscany and Modena. In the events which followed the revolutionary movements of 1830 and 1848, the power of Prussia was still further increased, and in the constitutional questions which arose she asserted her independence. The weak conduct of Frederick William at the period of the Crimean War for a time affected injuriously the influence of Prussia. But on the other hand Austria in 1860 was very materially weakened by the loss of her Italian possessions.

The two volumes of this work, which alone have as yet come to hand, bring the narrative down to 1862, but the subsequent events must be fresh in the minds of many; the breaking up of the German confederation in 1866 with the overthrow of Austria, and the elevation of Prussia to imperial rank; the absorption by Prussia of Nassau and Hesse Cassel, as also of the free City of Frankfort, so long the seat of the German Diets, and of Hamburg; also the Franco-Prussian war which terminated so gloriously for Prussia and the German states that were banded with her.

But perhaps few have realized the importance of the transference of the Imperial power from the Austrian to the Prussian crown, and as few have understood the full import of that act by which King Wilhelm on the 1st of January, 1871, placed on his own head the old Imperial crown, and revived the Holy Roman Empire. It is not a little remarkable, but very significant of the course of events, that the crown of the Holy Roman Empire should now rest on the head of the great representative of Protestant ascendancy in the councils of Europe.

These volumes are exceedingly interesting, and are written in a

clear and attractive style. Von Sybel had access to the documents in the state archives, and the registers of the Foreign Office, and has made a faithful use of them, while he has thrown himself into his work with great enthusiasm.

G. D. F.

The Lambs in the Fold. By the Rev. John Thompson, D.D., Sarnia.

This little book makes no claim to high scholarship, and proclaims no new views. It is simply the clear and strong voice of a man who has both a head and a heart ; who is at once a sound theologian and a devout student of human nature in its religious aspect. He offers an antidote to a teaching concerning the spiritual life and welfare of the young that has become so prevalent in these days that many ministers and teachers of youth are simply accepting and propagating it with fervour before taking it to the touchstone of Holy Scripture. Earnest appeals are often made from the pulpit to quite little children to repent, and be converted and become the children of God. Religious parents are often found in the greatest anxiety about the spiritual state of their children, because they can tell nothing of that experience which is called conversion and which many profess to know much about. Sabbath School teachers are being constantly exhorted in the different periodicals provided for their assistance and guidance to aim above all at the conversion of their scholars. At Revival services which according to their teaching should be called Saving Services, there are often large numbers of mere boys and girls reckoned amongst the converted and the saved. In ministers' reports to the Courts of the Church, children who have received their first Communion, are often spoken of as having joined the Church. All this implies a teaching which the author of this book considers is wholly unscriptural and pernicious. He states with great clearness what he believes to be the correct doctrine, and urges its acceptance with great force and tender earnestness. After showing in a very interesting way, that the Christian Church is but a development of the Jewish, and not a separate and independent growth, he discusses at length, the meaning and privileges of circumcision and baptism, their respective initiatory rites ; and shows that the children under the Christian dispensation, are exactly in the same position as the children under the Jewish dispensation were in virtue of the initiatory rite, namely, in the Church, the children of it, in covenant relationship with its only Head, the Lord Jesus Christ. This being so, he insists upon it, that the scriptural and true aim of religious teaching of the young is not their conversion, and their joining the Church, but their nurture and admonition in the Lord, and their

steady advance in grace as they advance in years, their continuance in the Church and in their covenant relationship to God. The writer's contention is in our opinion correct, and is confirmed by general experience. It is such training and not conversion that has produced nine tenths of the ministers, office bearers and exemplary members of the Christian Church. They needed no conversion. When such individuals therefore are found insisting upon an experience in others as absolutely necessary to salvation, of which they themselves when examined know nothing, they are lacking in reflection, or sincerity, and are actually hindering, whilst striving to advance the kingdom of God on the earth. They are giving to conversion the prominence and importance of sanctification. They are applying to the whole a doctrine that is applicable only to a part, and the great endeavour should be to prevent that part being other than small. In several chapters dealing with the nurture of the Church, Family Life, and Family Religion, Dr. Thompson successfully shows how this can be effectively done. They contain the very best advice on the subject, given in the very best way, and we can only characterize them as excellent and with confidence recommend them to the thoughtful perusal of all persons having anything to do with the religious training of the young. There is frequently a repetition of idea indicating what a few other things do, that the chapters were originally special discourses, delivered at intervals, but this is only an advantage if it serves to emphasise the important truths so seasonably and ably inculcated.

J. M.

The trial of Dr. Briggs before the General Assembly—A Calm Review of the case by a Stranger who was there. Anson, Randolph & Co.

This is an able review of the Briggs trial before the General Assembly at Washington, by one whose sympathies at the beginning were with the prosecution, but who, as the case advanced, and as he listened to the arguments, became convinced that the prosecution travelled beyond legitimate grounds. The case is presented in this volume of 196 pages with great clearness and impartiality by an author who shows himself quite competent to judge, and who, trained in the most rigid orthodoxy by revered professors at Princeton, was the more likely to give the prosecution every advantage compatible with fairness.

The book deserves and will repay a careful reading, and cannot fail to prove that there was *animus* against Prof. Briggs, and that this

was greatly intensified in the course of the trial. Time and again the prosecution refused to take Dr. Briggs' statement of his own positions, and tried to fasten conclusions and inferences upon him which he emphatically repudiated, and which arose from erroneous modes of statement. The greatest confusion arose from want of definition of terms used, and consequent misunderstanding of one another's views. "What was plain truth to him was distorted truth to them. This difference of opinion between the majority and the minority was not a difference of scholarship, nor of intellectual ability, nor of soundness in the faith, nor of fairmindedness, it consisted in this, the minority saw the matter in dispute from Dr. Briggs' point of view, while the majority did not."

In the discussion of "*Inerrancy*," the author makes some discriminating remarks on *Inspiration* of great value. Grant the position which the prosecution took on this point; and the Church will be saddled with a new dogma not contained in the "*Confession of Faith*," and which was not taught by the Reformers, nor by the leading exponents of Reformation theology. The careful reading of this book has convinced us more strongly than ever that the American Church has made a fatal mistake in prosecuting Prof. Briggs as she has done, and putting out of the ministry a great student, a reverent scholar and a good man, such as she can ill spare. T.

A Short Course in the Theory of Determinants. By Lænas Gifford Weld, Professor of Mathematics in the State University of Iowa. Macmillan & Co., New York and London. 1893. 238 pages, Octavo.

During the last thirty or forty years great advances have been made, not only in the methods of teaching mathematics in our schools and colleges, but also in the methods employed in mathematics, in the extent to which the subject is pursued in our Educational Institutions, and in the thoroughness with which it is studied. Any person can easily convince himself of the truth of the preceding statement by comparing the school and college text-books of thirty or forty years ago with those in use in similar institutions to-day. This does not mean to assert that all the present text-books are equally meritorious, or that all teachers have brought the practice of their profession to the same high level. There are possibly, to exaggerate a little, ancient text-books and ancient teachers to be found in some of our institutions even at the present time. But all the great teachers of the age and all the writers of approved text-books are fully alive to the necessities

which a constant advance of nearly half a century has imposed upon them. This advancement is mainly due to the fact that higher ideals of teaching have acted favorably upon the production of higher and better text-books, and these latter have in turn reacted upon the character of the teaching.

Determinants were discovered, and their properties to some extent investigated, by Leibnitz in 1693; but neither Leibnitz nor his successors for many years after had any idea of the important part that these new functions were to play in the extension and simplification of even rather elementary mathematics.

In the then elegant work of Gregory on analytical solid geometry, written in 1845, determinants are employed only in their crudest and most unwieldy forms, and the writer could have had no idea of the powerful aids to analysis with which he was merely playing. So Salmon, also, in his classical work on Conics written about 1850, did not dare to introduce the determinant notation, because he feared that his readers would not be acquainted with the subject. No good teacher of co-ordinate geometry now would think of beginning this subject without previously preparing his pupils for the better mastery of it, by an elementary discussion upon the matrix, its properties and its transformations.

The book whose title heads this article is intended as an elementary text-book upon this subject of determinants.

Like all of the works published by the Macmillans this book is admirably gotten up; but it is more than this, it is admirably and clearly written, leading the student on by easy steps from the simplest to the more difficult parts of the subject.

After dealing with the general subject, the author goes on to discuss the special subjects of symmetrical and skew determinants, Alternants, Continuants, Jacobians, Hessians and Wronskians. The book closes with a chapter on linear transformations.

The work is sufficiently full for the great majority of students, and it is not overburdened with numerous and unnecessary details.

We consider it in many ways a better elementary work than Muir's, which is now out of print, and a vastly better work than Scott's.

The work is supplied throughout with a sufficiency of well selected examples.

The only objectionable feature that we have noticed is the accented notation employed in a part of the book. This notation is certainly not elegant, and it is troublesome to write,

D.

Plane Trigonometry. By S. L. Loney, M.A., Cambridge; at the University Press, 1893. 506 pp. 8 vo.

Elementary Trigonometry. By H. S. Hall, M.A., and S. R. Knight, B.A., etc. London, Macmillan & Co., and New York. 1893. 355 pp. 8 vo.

Of making many books there is no end. This seems to be especially true in the subject of Trigonometry, as the Macmillans alone have brought out somewhere about eight or ten new text-books on this subject within the last five years. Trigonometry being, as it is, the students introduction to periodic functions, and too often his introduction to the application of the symbols and forms of Algebra to geometrical magnitude, and being par excellence distinguished by the beautiful symmetry of its formulas and the universal extension of its principles and results, has a sort of fascination for the mathematical writer as well as for the mathematical student.

We heard a prominent teacher remark recently that there are too many text-books on Trigonometry, and that none of them seem to be exactly what the teacher wants.

We agree to some extent with these remarks, and to us the majority of text-books on Trigonometry aim at being too comprehensive, and leave too little for the explanation of the teacher and the ingenuity of the pupil. The writers appear to forget that as brevity is the soul of wit so it is to some extent the soul and spirit of a good text-book, and they accordingly crowd their volumes with formulas for which there is little or no use, to the neglect at times of things which are of some importance. In short the works become too highly theoretical and too little practical.

The works whose titles head this article are both faultlessly produced, and as the subject usually goes, they are admirable works upon Trigonometry to the extent to which they deal with it. Mr. Loney's work extends into the higher parts of the subject following from Demoivre's theorem, while Hall and Knight confine themselves to the elementary portions, or those preceding Demoivre's theorem; but we cannot help thinking that 336 pages of small print is altogether too much for an elementary text-book upon Trigonometry.

These books are written by English scholars, and they may be admirably adapted to their purpose, but for countries and for institutions where pupils are treated to some sensible course in Geometry instead of being fed upon the dry bones of Euclid, these books contain a number of redundant theorems, such as that the circumference of a circle is proportional to its diameter, all those that pertain to lines in opposite senses, etc. Also, for their bulk, they are not very complete in

Geometrical theorems. Thus they give the distance between the incentre and the circumcentre of a triangle, but fail to give the distance between the incentre and the nine-points centre, and thus to prove Furbach's theorem.

The chief objection to the books, however, as elementary text-books is not that they leave anything out, but rather that they include too much. Thus the giving of the table of equivalence of functions is not only unnecessary but objectionable, as the pupil should be made to work out such a table for himself. A similar remark applies to the giving of the graphs of every function.

Either of the works would be of the greatest value to a pupil whose time is unlimited, but we are of the opinion that instead of more fullness, as seems to be the tendency, more brevity should be aimed at in furnishing text-books for the average student in the American schools and colleges.

D.

CURRENT EVENTS.

THE European pot boils furiously but it does not boil over. Greece is added to the list of bankrupt nations and Servia will likely follow. Italy is in a very bad way financially, but the strong man, Crispi, is again at the helm and what can be done he will do. While he is Premier, the Dreibund will hold together. The General Election sent to the new Chamber in France 311 Moderate Republicans, and these—in a House numbering 575 members—should enable that party to form a Government lasting long enough to let the world get acquainted with its *personnel*. Besides, the Chamber contains some 33 Conservatives who—in obedience to the Pope or their own good sense—have accepted the Republic *ex animo*. But the Moderates are a conglomerate, not a homogeneous mass, and one great condition of stable Parliamentary Government seems still lacking,—a leader head and shoulders above his followers. M. Gabriel Monod, who is our safest interpreter of men and events in France, pointed in the November *Contemporary* to M. Casimir Perier as the man qualified for the position. He has since been all but forced by the

President to form a Cabinet, and he took up so decided an attitude of opposition to political Socialism and of sympathy with reasonable Conservatism, as regards the Church, that he narrowly escaped defeat at the outset. But, he had probably counted the cost of his attitude and will now reap the reward of firmness. The rising tide must be in favour of friendliness with a Pope like Leo, who accepts democracy in Old and New World alike, commands a critical study of the Holy Scriptures and speaks strong and sympathetic words regarding the rights of labour. If it is, there is good hope for France. If not, she may fall into incapable hands, and a moment's passion may hurry her into a fatal war. All who honour France for what she has done, in almost every century since the fifth, when she hurled back the Huns and saved European civilization, and for what she is capable of still doing, will wish God-speed to M. Casimir Perier. The world could ill spare France, and Europe could not do without her at all.

In the meantime the Anarchists are playing strongly into the hands of Conservative Government. The bomb thrower from the gallery of the Chamber will rally the propertied classes, and these in France include almost the whole population. A Government that is not afraid of appealing to Conservative instincts, without being suspected of reaction, or worse—of Clericalism, has every chance at this time. The alliance with Russia may indeed tempt it to go farther than France will tolerate. It is true that the popular enthusiasm for Russia is apparently sufficient to stand any strain, but such a notion will be entertained only by those who have a superficial knowledge of Frenchmen. Their isolation in the presence of the Dreibund made them go mad with joy when the presence of Russian sailors in their streets proclaimed to the world that, far from being alone, a hundred millions stood by their side. But France is too passionately devoted to liberty to sell her soul for an alliance with the persecutor of Poles, Jews, Stundists and Roman Catholics. She rejoices in it now, but she cannot repress herself indefinitely, even to please such an ally as the Czar. Should the national self-respect be touched, she will recoil to the opposite extreme, or at any rate take speedy vengeance on a Government accused of compromising the national honour. Russia's game is perfectly plain. She needs financial backing and she has gotten it, by being civil to the rich Republic. Such a nominal price may well be paid for millions of hard cash, even by an autocrat, as modern warfare cannot be carried on without millions of money as well as millions of men.

The new alliance has thrown England into something like one of the old scares that came over her periodically, before the Volunteer movement practically doubled her defensive power. It is actually believed by sane people in London and by naval experts, that Russia and France may begin the great war by attacking England! The cry to strengthen the navy waxes louder and louder. Mr. Gladstone may in consequence be forced to spend some unnecessary millions sterling. In that case, he will be justified in throwing the burden on the well-to-do classes, who are responsible for the scare, in the form of increased Income tax. The one thing that Russia and France dread is a union of

Britain with the Dreibund, yet it is thought that they will go out of their way to make the thing dreaded a reality, and at the same time make Britain put forth all her immense strength as she never would, if the war were not waged directly against herself. An unprovoked attack on an Empire whose supreme interest is peace, especially when a Premier is in power who hates war with a righteous hatred, but who when struck is by no means inclined to turn the other cheek, would at once unite the three kingdoms and make the great Colonies one with them. It is also calmly taken for granted that, while the conflict was going on, Italy would seek no rectification of its frontiers, that Germany would do nothing in the same direction by annexing Luxembourg and Baltic Provinces once Teutonic and still Teutonic at heart, that Poland would keep quiet, and that Austria-Hungary would interpose no new obstacles to the long meditated advance of the Bear on Constantinople! Russian statesmen understand the situation perfectly. They are not in the habit of playing their enemies' game, and President Carnot is not a fool. They can afford to wait much better than poor Italy or even Germany. The English fleet was never so strong as now, and its strength can be increased at a rate sufficient to meet all emergencies, so great is the capacity of its ship yards and docks, public and private. But London cannot live without its sensations, any more than Paris. As that shrewd, tuft-hunting gossip, the once "Country Parson," puts it, in his last book, "Men living in awful London come to have many alarms about the political outlook which never reach us here at all!"

Incidentally, the scare will have the effect of making the British public regard favourably the proposal of a Pacific cable connecting Australia directly with Canada, and so binding the Empire telegraphically, without the risk of interruption in time of war. The importance of such a cable is now universally admitted, though Mr. Sandford Fleming has preached it to deaf ears, ever since the great Imperial and Inter-Colonial Conference was held in London. Canada is subsidising a line of steamers between Sydney and Vancouver, but how can steamers expect regular freight when telegraphing rates are almost prohibitory? Commerce cannot live nowadays without telegraphs and cables. The mission of Mr. Mackenzie Bowell and the visit of Mr. Fleming to Australia took place at the right time. They have done excellent work in more ways than one. Mr. Fleming's memorandum seems to have convinced our brethren under the Southern cross that the cable, instead of being in the hands of a company, should be owned by the Colonies and Britain. It would pay better than even the Suez Canal shares or the land telegraph system in the United Kingdom, and the initial cost would be trifling, especially if the money was raised under Imperial guarantee. The agreement of New South Wales and Queensland to assist a company that was to be controlled by the French Government wakened up the Colonial office to remonstrate with the erring Colonies; but Sir Thomas Mellwraith, the burly Scotchman, who is one of the permanent figures in Australian politics, answered by grimly congratulating the Home office on its new-born zeal, pointing out that New Caledonia and the New Heb-

rides could have been British at no cost long ago, and that, if he had not been snubbed by the late Lord Derby when as Lord Stanley he was Colonial Minister, New Guinea would be wholly British, instead of being partitioned among three powers. Sir Thomas, having thus delivered himself, will now act and bring Queensland into line with her sisters, for his bark is worse than his bite, and though he is a Queenslander first, he is a firm believer in the British Empire.

There is no community in the world so ready to try political, social and economic experiments as New Zealand. The people have a buoyant feeling that, if the experiment does not succeed, they can "right about face" at short notice, with little harm done. They have just made women suffrage as extensive as that hitherto exercised by men, and in order to note how the women vote, their ballots are to be of a different colour. The experiment will be watched with interest, for it is not simply permission to vote at a plebiscite, which might mean as little there or in Ontario as it has turned out to mean in Manitoba, nor the municipal suffrage, nor the right of spinsters to vote for School Trustees, but the right of all women to vote for Parliamentary candidates as freely as men. The Parliament of New Zealand includes several Maori members, elected by the natives, and, in the absence of information to the contrary, it may be assumed that the franchise has been given to the Maori women too. Democracy is certainly being carried out in very thorough-going fashion, when in Europe the Hapsburgs are pressing universal suffrage on peoples apparently not very anxious to have it, and in Australasia manhood is widened into womanhood suffrage with scarcely any opposition. The Bill would have passed in 1891, had it not been defeated in the Upper House by the votes of the two Maori Councillors ! New Zealand seems to be solid on the subject.

South Africa goes marching on to the North, and the white race,—British and Boer—having found a leader in Cecil Rhodes, is sweeping out of its way forces too stubborn to be amalgamated and too dangerous to be disregarded. No better or more necessary work has been done for many a day than the occupation of Mashonaland in 1891 and the defeat of the Matabele in 1893. Much sympathy has been expressed for the warriors of Lobengula who were mowed down with Maxim guns by Dr. Jameson's little army before they could get within striking distance ; but it would be just as sensible to weep for the Iroquois, who had exterminated the Hurons and every other tribe round them, two centuries ago, or for the Malay pirates who drenched the seas with blood and made regular commerce impossible until they were crushed by British gunboats, or for the Arab slave-traders whose gangs have turned vast regions of Central Africa into wildernesses. As for using Maxims, would Mr. Labouchere or Mr. John Burns prefer another Isandhlwana ? The Matabele impis had to be crushed in Mashonaland just as they were in Zululand some years ago, if the work of civilization was to go on, and the speediest way of teaching them the uselessness of war was the most merciful way. It is well to pity the fox, but is there to be no thought for the hundreds of hens whose roosts he delighted to harry ? The Matabele are Zulus

who fled—some sixty or seventy years ago—from the main body because they had been unable to carry out the orders for the utter extermination of another tribe with which they—or rather their leader Moselekatse, the father of Lobengula—had been entrusted. “Thorough” was the policy of the rulers who taught them their rigid discipline. So faithfully was the policy carried out that it was computed that Tchaka, for instance, had to his credit the deaths of more human beings than the first Napoleon. The Matabele under Moselekatse—or Umsiligazi—took care to put a long distance between themselves and their former master, and they made the whole of it a desert, in order to prevent pursuit. Since they entered Mashonaland, they have terrorized or exterminated the old inhabitants, who were industrious tribes. Their courage and discipline made them invincible, and as they lived only for war, peace was inconsistent with their system. It was therefore necessary, in the interest of peace, when forbearance ceased to be a virtue, to teach them that the epoch of never-ending war and merciless pillage had come to an end and that the white race is now master for the common good. It shows singular ignorance of the elementary facts of the case, when able editors write as if the recent fight against this terrible military despotism was in some way connected with “Imperialism.” The one aim of the Imperial Government has been to restrain the responsible Government of Cape Colony and the Chartered Company and to insist simply that justice shall be done and mercy extended even to the Matabele; while the deepest thought of Mr. Rhodes, who is backed by British and Boer alike in South Africa, is that Mashonaland, a glorious country of 250,000 square miles, shall be something more than a mere raiding ground for impis or regiments of disciplined barbarian bandits.

THE terrible riots in the principal cities of India between Hindoos and Mahommedans, because the former think the latter intend to insult their religion whenever they kill a cow, and the latter so despise the former that they very probably exercise their rights in an exasperating way, are striking object-lessons of what the result would be, were the people of that Continent-like country left to themselves. We know what would happen if the keepers were taken away from a menagerie or Zoological garden and the doors of the cages thrown wide open. There might be hundreds of the rabbit, sheep and cow kinds, but one tiger and his mate would soon be “on top.” The two hundred millions of Hindoos would be simply sheep to the fifty millions of Mohammedans. Their “faith” makes the latter united and warlike, and they have not forgotten that their ancestors conquered and held India until recently. Caste splits Hindoo society from top to bottom into hopelessly separated sections, and all sections alike have therefore been the prey of one conqueror after another for nearly a thousand years. British rule gives them the rights of men and is awakening a spirit of union and nationality, but it will take centuries to do the work. These broad facts were freely admitted by all East Indians who visited Chicago, and on these they based their hearty loyalty to our

Queen—their Empress. Lord Lansdowne, the Viceroy, has recently told the representatives of the rival faiths, in that unpretending but unmistakeable language which he uses, that the Imperial Government will respect their religious convictions and prejudices, but that if religion leads to disorder so much the worse for their having such a religion, because “disorder and crime will be put down with a strong hand.” As a late Chief Justice of British Columbia remarked to the gold miners, when they first swarmed from the South into Kootanie, with six-shooters ostentatiously displayed,—“Boys, if there's shooting in Kootanie, there will be hanging.” That tone is understood by Orientals and Occidentals. It worked like a charm in Kootanie, and it is still more likely to succeed in Hindostan.

MR. Cleveland's character shows little or no sign of being worn down by the attrition of party. His one mistake, appointing as Ambassador to Italy a man who had made a large contribution, unconditionally, to the Democratic campaign fund, has ended in that gentleman resigning, and in a declaration by the President that the press pronounced judgment without adequate knowledge of the facts of the case. What an advance in the public morality of our neighbours the general treatment of this little episode shows! The United States appears to be on the up-grade while Canada is on the down-grade. Should this double movement continue, the argument against political union would be reversed. “Donald, I have changed my mind,” remarked a damsel to the swain she had rejected a year before. “So have I,” was the unpolite rejoinder. Canada must prove that she deserves a better fate. Moral attraction and moral repulsion are irresistible forces. The value to the nation of a steady moral force like President Cleveland is incalculable. His treatment of the Silver and the Hawaiian questions are specimens in different ways. Every one declared that the former could be settled only by a compromise. His own Cabinet had been forced to the same conclusion; but he remained immovable and triumphed. With Hawaii, he has apparently failed; but it is a failure more creditable to the nation than Mr. Stevens' success, and besides the end is not yet. The President has vindicated the honour of the United States, and having investigated the case and done all that the Constitution warranted him in doing, he has handed the matter over to Congress for final settlement. His action was in opposition to Mr. Blaine's policy, which that good elder—Mr. Harrison—after making a wry face—had swallowed, to every bad element in his own party, to national spread-eagleism and—alas, that it should be necessary to add—to the almost unanimous outcry of the “religious” press. His faith in the sober sense and moral convictions of the American people is strong, and he plays no tricks with his own intellect and conscience. He is straight, from first to last, in vision, speech and action. G.

The Wilson tariff bill which is now before Congress seems to be on the whole a very statesmanlike measure. There is an immense difference in immediate effect between a protective measure, which

easily attracts capital into favoured industries either natural or unnatural to the country, and a free trade measure, which cannot at once redeem the capital again. The descent of capital is easy, the return difficult and slow. Hence, though the Wilson bill is a decided step in the way of return to free trade, or at least to a revenue tariff, the framers of it have shown wisdom in not attempting to make the return at one effort. What changes the bill may undergo in its passage through Congress it is impossible to say. As between Canada and the United States the bill as drawn up admits of many mutual advantages, and if our government follows with a liberal reform in our tariff we may expect a considerable increase of prosperity. Free and spontaneous action on the part of each government in the reduction of its tariff is very much to be preferred to commercial treaty or commercial union. Commercial union cannot be had without discrimination against Great Britain, and that is not to be thought of by any wise statesman. It would be as disastrous to Canada as discrimination against the United States. In matters of trade these two great countries are equally necessary to us, and the freer trade relations we can have with them the better for us. Coupled with the Wilson bill is a measure for the introduction of direct taxation, the progress of which will be watched with interest. The great defect of indirect taxation as a financial measure lies in the difficulty of adjusting the country's income to its needs. The great income of the U. S. Government in the past unduly increased its expenditure, and now when it has fallen off somewhat the government is in financial distress. Direct taxation affords an easy and safe remedy for this evil.

A. S.

Though the Wilson Bill is simply the logical outcome of the situation, protected interests would not believe until they had seen. Now they are indulging freely in semi-profane language. Log-rolling will be tried, especially in the Senate, where two or three votes would turn the scale the wrong way. These are expected from the South, where manufacturing interests have grown up, whose political strength is out of all proportion to their voting power. A few modifications may be permitted, but if radical changes are insisted on, the President may veto, and that would smash the Democratic party. The fear of this will have a wholesome effect. "We must hang together or we shall hang separately" has proved a potent cry before now. Financial depression and the closing of factories are urged against the Bill. But these are the results of the McKinleyism, under which the country still staggers. How can the poverty of 1893 be due to a tariff that is not to begin to operate till the middle of 1894? If the Democrats remember that the darkest hour is just before the dawn, and that when prosperity returns—as it must—to the country, it shall date from their legislation, they will put on all steam and go ahead.

CANADA has every reason for congratulation on the Behring Sea Arbitration and its results. The Republic will have to pay damages for Mr. Blaine's piratical policy, while his preposterous assumptions have been laughed at by the civilized world. The real question at

issue was not the number of seals we could spear or shoot—*per fas aut nefas*—for a few years, but our right to navigate and to fish or hunt on the open sea. It is almost incredible that seventeen Canadian vessels should have been seized and their crews imprisoned in arrogant denial of that right. Closed months, the proper zone round the Pribyloff or American Islands and the use of shot-guns are matters for experts, and it is almost a pity that Sir John Thompson did not concur with Lord Hannen in accepting the decision of the neutrals on the evidence submitted. That would have been the nobler attitude, though perhaps politically impossible. Besides, the evidence was conflicting and the decisions may yet be reconsidered, when the parties interested have had time to cool off. It is horrible to think that, during the years when the outrages were committed, one defiant act of a Canadian sealer or a British captain or the slightest lack of patience and magnanimity on the part of Lord Salisbury would probably have led to war.

Was the Winnipeg turn-over the caper of a flea or the movement of a straw that shows how the current is running? Mr. Daly is amusingly cocksure on the point, for he felt the bite, but the Government must be in doubt. It is vital to them to know, and the only way to find out is by making a sufficient number of tests. Better lose half a dozen seats than lose a General Election. So, a man like Sir John Macdonald would argue, and then trim his sails according to the wind and tide. That may not be the highest statesmanship, but it is better than a dogged refusal to read the signs of the times. In 1877, the country declared that there was nothing sacred about 17½ per cent., and it is not likely to see anything sacred in specific duties that conceal the percentage, or in sugar refiners accumulating fortunes by a tax that does not add a dollar to the revenue, or in duties on books that no other country—civilized or semi-civilized—imposes. G.

IN the November number of *The Forum* appeared two articles on the ever simmering question of political union with the United States. They were written by Canadians and represent opposite sides of the question. One, the distinguished French Canadian poet, Louis H. Frechette, favours political union as the most desirable future for the French element of Quebec. The other, Mr. F. Castell Hopkins, maintains that there is practically no desire in Canada for union with the United States, and gives his reasons why there should not be. Mr. Hopkins makes a good representative of the Yankee tail twister of one or two generations ago, except that he is on the other side of the fence. It is to be hoped that the Americans will appreciate this reciprocity which, if somewhat delayed, is none the less vigorous and reckless in statement. The article may be described as a lively caricature in black and white. The blackness of American political, legal and social institutions comes out with force and vividness against the white background of similar Canadian institutions. As a caricature it is pretty successful and somewhat funny. It was a pity however to set it up beside Mr. Frechette's article as though it were an adequate presentation of the other side of the question.

Mr. Frechette's article is the statement of a well informed, liberal and moderate French Canadian, not, unfortunately, representative of the majority oft hat national element in Canada, yet representative of an important minority. He recognizes first of all that none of our numerous acts of settlement have yet given us a basis for common national life. As compromises intended to get over periodic political difficulties by re-arranging without removing them, they could not be expected to show much political wisdom of a scientific sort. Two opposing national principles are everywhere recognized in our government. As Mr. Frechette does not think that the French element should give up its national life, and as he has no desire that the English element should give up its national life, he has naturally no solution for the Canadian problem within the present limits of Canada. For having granted to the French Canadian his national rights after the Conquest, and for having maintained them since he should render to Britain gratitude, respect and obedience while he is under her power. More than that the very nature of her grant can not require. All this is rational and clear enough ; but when he turns to the future the argument does not seem so cogent. The fear of being forced into Imperial Federation may be dismissed as very remote. Disinclination to go back to France over the ocean is sensible. Remaining in Canada with a separate national life but an uncertain future he sets aside as unsatisfactory, and proposes union with the United States. Sacrifice of separate nationality is inevitable in that case, but what could be retained under state freedom together with the larger life of the union would apparently be a general gain to Mr. Frechette and his minority. That the majority, led by the Clergy, would consider this a gain is very doubtful. The Clergy will naturally hold to their present favoured position under their separate nationality, and if, at any time in the future, a distinctively Canadian national spirit should arise and assert itself it is quite probable that the French would prefer absorption in Canada to absorption in the United States.

A. S.

A new factor promises to exert an important influence on both Dominion and Provincial politics. The Patrons of Industry represent the most numerous, the most healthy and the most reliable element in the community. Tired with being exploited by lawyers and professional politicians, they have quietly organized and have overthrown both of the old parties in the first election in which they took a hand. It was a tactical blunder of colossal magnitude to put Sir Oliver Mowat in open antagonism to such a force. If the leaders of the new organization are wise and unselfish men, they may exert a vast influence for good by breaking up party lines that represent dead issues, as well as obtaining for us simple and economical government, lessening the amount of patronage or bribery fund at the disposal of governments, and taking the shackles off trade, commerce and industry. In what lines did Canada get most credit at the World's Fair ? In those in which her sons must meet the competition of the world without "Protection." The man who cannot read this lesson should go back to school or to the nursery.

G.

QUEEN'S QUARTERLY.

VOL. I.

APRIL, 1894.

No. 4.

All articles intended for publication, books for review, exchanges—and all correspondence relating thereto—should be addressed to the editors, Box A, Queen's University, Kingston, Ontario

DANTE AND MEDIEVAL THOUGHT.

I.—THE THEOLOGY OF DANTE.

THE Middle Ages may not inaptly be regarded as the period in which a preparation was made for the wider and freer life of modern times by the gradual appropriation of the culture of the past, as illuminated and transformed by the spirit of Christianity. When we consider the complexity of the material, we cannot be surprised that the process of assimilation was incomplete. Judea, Greece and Rome may each be said to have concentrated itself on a single task : it was the problem of the Middle Ages to combine into a whole the religion of Christ, the philosophy of Greece, and the law and polity of Rome ; and to harmonize these various elements with the powerful individuality and love of freedom characteristic of the Germanic peoples. The imperfect fusion of these factors is shown in the series of antagonisms, which rule the whole of medieval thought : the future life is opposed to the present, the sacred to the secular, faith to reason. But, it was the church, and the church alone, which preserved the germs of a speculative view of the world, and made possible the rise in due time of modern philosophy. In the dissolution of the old order of society, and while a new order was gradually shaping itself, it developed from the invisible beginning of a small religious community into a compact and powerful organization. In its office of teacher of Europe, the Church employed the system of doctrine which received its final form at the hands of Augustine, its great speculative genius, and in that

system the dualism of the present and the future life, the Church and the world, faith and reason, is already stated in its most uncompromising form.

Now Dante is the champion and exponent of this dualism, and yet he seizes it at the moment when it is passing away. His theology is Christianity speaking in terms of Neo-platonism and Aristotelianism. His passion for political freedom is Germanic, but it utters itself in the language of imperial Rome. His impassioned zeal for the regeneration of society is half concealed in his vivid picture of the horrors of Hell, the expiatory punishments of Purgatory and the glories of Paradise. The spirit of the coming age speaks through him, but it clothes itself in the forms and the language of the past. In coming to the study of such a writer we must seek to do justice both to what he explicitly affirms, and what he unconsciously suggests. The spell of Dante's genius is so potent that there is danger of our attributing to him ideas beyond his age. This danger we must endeavour to avoid, but we must also beware of the more serious mistake of narrowing down the large suggestiveness of his poetic intuitions to the Procrustean bed of his explicit logic. What Goethe says of Byron is in some degree true of every poet, that "when he reflects he is a child." This is especially true of Dante, who like all medieval thinkers proceeds from preconceptions which we cannot accept, and moves to his conclusions by a method of ratiocination which to us seems almost childish. To do him justice we must fix our attention upon the perennial truths which these preconceptions and artificial forms of reasoning merely indicate. Much of the interest of Dante lies in the conflict between the old and the new, a conflict which was on his part largely unconscious. By the force of his genius he holds together discrepant elements which can only be reconciled in a higher synthesis. The movement towards a more comprehensive view of life, which he never himself explicitly reaches, is partly indicated by the way in which he makes Bonaventura and other mystics supplement the deficiencies of Aquinas. He follows the great schoolman as far as the critical intellect enables him to give a clearly formulated theory, and when he is seeking to express the Unity of all things as summed up in God he falls back upon the mystics. Within the limits of medieval thought Dante's sympathy is wide and flexible :

he combines Bonaventura with Aquinas: he enters with the same warmth of appreciation into the stern conflict with error of St. Dominic as into the loving ministrations of St. Francis. His catholicity is perhaps nowhere more clearly shown than in his placing Averroes among the throng of philosophers who surround the "Master of those who know." This is the same Averroes against whom the Synod of Paris had fulminated as the greatest corruptor of the faith. Dante simply calls him "Averroes who made the great commentary." Notwithstanding these and many other instances of independence and breadth of view, Dante is a true son of the medieval church. Liberality in the modern sense he does not possess. Carlyle is quite right in saying that he "does not come before us as a large, catholic mind, rather as a narrow and even sectarian mind;" though we must not forget that his narrowness and sectarianism are rather in his formulated creed than in the spirit which informs the free creations of his genius. One is tempted to discount the intellectual narrowness of the first great Christian poet, and dwell only upon the permanent element in his "criticism of life"; but I doubt if this method is as valuable as that which takes him as he is, in his weakness as well as his strength; and I shall therefore begin with the explicit creed which forms what may be called the philosophy of Dante.

The opposition of faith and reason which rules all the thought of the Middle Ages is accepted and defended by Dante. The truths of faith rest upon the revelation of God as contained in "the old and new scrolls." They are not only beyond the power of human reason to discover for itself, but they are incapable of being comprehended even when they have been revealed. God is indeed partly manifested in created things, but the infinite riches of His nature is revealed only in his word, and even then the human mind must in this life be contented to accept what is revealed without seeking to penetrate the mysteries of faith. "Be content, race of man, with the *quia*; for if you could have seen all, what need was there that Mary should be a mother!" In the future life, indeed, man will see God as he is. This is expressed by Dante in his pictorial way when he represents Beatrice as fixing her eyes on the vast circling spheres of heaven, and finds himself drawn upwards by her eyes, being like Glaucus "trans-

humanized" or raised above the limits of the finite intellect. How weak human reason is of itself is shown by the errors into which we fall when we trust to our senses. Mere human knowledge is as far from divine knowledge as heaven is from the earth. The proper attitude of man towards the revelation which God has given of himself is therefore that of implicit faith. Having accepted the truths so revealed human reason may draw inferences from them, but it can never discover them for itself. Yet faith is not contrary to reason, but only beyond it; when man is at last admitted to the beatific vision of God, he will then directly contemplate what he can now only accept in faith. Moreover, the human mind partly bears the impress of its divine Original, and hence it cannot be altogether without some apprehension of God; it discovers the divine nature dimly, as the eye sees the bottom of the sea at the shore, though it cannot penetrate the unfathomable depths of the ocean. Philosophy prepares the way for theology by proving the scriptures to be the veritable word of God. The evidence is mainly that of miracles, but one of the strongest proofs, as Dante follows Augustine in maintaining, is the miraculous conversion of the world to the true faith. "If the world turned to Christianity without the supernatural guidance of God himself, this would be the greatest of all miracles."

The contrast of faith and reason is one with which we are all familiar, and it may be doubted if modern writers have added anything substantial to the doctrine as Dante presents it. Even the distinction of what is *above* but not *contrary* to reason he clearly expresses. The contrast is one which draws its support from various considerations. To Dante and all medieval thinkers it implied an identification of the contents of the holy scriptures with the dogmas of the Church. To us it is perfectly plain that such an identification rests upon a confusion between the fundamental truths expressed by the sacred writers and the interpretation put upon them by thinkers who brought to them forms of thought borrowed from later Greek philosophy. I do not say for a moment that the effort to express the Christian view of the world in terms of reflection was not a legitimate and necessary problem; on the contrary, it arose from the healthy instinct that Christianity was based upon an impregnable basis of truth. But the inevitable result of the attempt to extract a theology from the letter of scrip-

ture by the use of dualistic categories was to distort to some extent the essential ideas of Christianity. It is thus obvious that the claim which Dante makes for faith is really a claim for the implicit acceptance of the dogmas of the Church, themselves the product of an inadequate historical criticism and an inadequate form of philosophy.

There is, however, another element which contributes to the conviction of the opposition of faith and reason. The religious consciousness rests upon the idea of God, as the absolutely perfect Being, in whose presence man becomes aware of his weakness and sinfulness. This consciousness, though in an imperfect and undeveloped form, is found in even the lowest races of mankind, and indeed is inseparable from the consciousness of self. It ranges from the superstitious terror of the fetichist to the perfect love which casts out fear of the highest Christian consciousness. To a man like Dante, coming at the close of a period when the Christian idea of life had been proving its divine potency by transforming the whole life and thought of men, teaching them to rise above the transient things of sense and to view all things *sub specie aeternitatis*, the consciousness of human weakness and sinfulness was the central truth of the universe, in comparison with which all other truths seemed comparatively insignificant. What attitude but that of faith is becoming to finite man in the presence of the infinitude of God? Now, in so far as Dante by "faith" means this consciousness of dependence upon God, he is only expressing the natural attitude of every religious spirit. But it must be observed that "faith" in this sense is to be contrasted, not with "reason," but with the irreligious spirit of self-assertion, and with that limited and inadequate view of existence which never rises about the finite. The Christian religion, above all others, in bringing home to man the consciousness of the infinite perfection of the divine nature, destroys the very root of self-righteousness, making him feel that "after he has done all he is an unprofitable servant." But such a "faith" is not the opposite of "reason," but the very essence of reason; it is the revelation of the true nature of man as capable of finding his life only in losing it; it is a "faith" which fills his whole being and is the informing spirit of all that makes his life divine. Dante, however, in the usual medieval manner confuses this living practical faith with that

formulation of Christian ideas which had been stereotyped in the creed of the Church. Thus he virtually identifies Religion with Theology. To us it is perfectly obvious that, so far from being identical, the one may be widely apart from the other. It is not the "heart" that makes the theologian, except when theology brings to adequate expression what is implicit in the "heart." When "faith" is opposed to "reason," on the ground that the former contains truths incomprehensible by the latter, we are assuming a certain formulation of religious truth to be ultimate, and contrasting with it the irreligious view of the world. We forget that our theology may itself be inadequate. Now, a theology which is based upon a supposed absolute limit in human reason is necessarily inadequate, because it rests upon a fundamental contradiction. We can contrast a lower and higher form of reason, but to assert an absolute opposition of reason with itself is to make all our judgments, and therefore our theological judgments, unmeaning. A faith which is opposed to reason must be irrational. Theology, in so far as it expresses in terms of reflection what is implicit in the highest religious consciousness, is knowledge; it is in fact the philosophy of religion; and hence there can in this point of view be no valid opposition between truths of faith and truths of reason.

There is, however, another complication which gives countenance to the opposition of faith and reason. Faith, it is thought, rests upon truths directly revealed by God himself, whereas the truths of reason are the product of the natural and normal exercise of the human mind. Now, in so far as this means that there have been men who were lifted above the divisive consciousness which is immersed in the finite and particular it is undoubtedly true. But surely it cannot be meant that God is present in some operations of the human mind and not in others, or that man can be man without having some consciousness of the Infinite. The holy men of old who spake as they were moved by the Holy Spirit were indeed inspired, but their inspiration consisted in realizing the divine meaning of the world with a power and vividness that ordinary men never reach, or reach only in their best moments. And what is thus revealed in them, the truths with which they are inspired, are not unintelligible mysteries. They speak as they are moved, but what they utter is the highest

knowledge, and can seem unintelligible only to those who are unable to enter into the fulness of its meaning. Hence faith must consist in elevation to the point of view of the elect of the race, and failure to reach this point of view must make our faith inadequate. To commend faith because it blindly accepts what is declared to be unintelligible, is to degrade not to elevate it. The faith which is higher than knowledge can only be knowledge in its highest form. Like all medieval thinkers Dante holds that human reason is by its very nature conditioned, and therefore unable to comprehend the "mysteries" of faith. But a true faith can contain no "mysteries" that are irrational, but only those which seem irrational to the mind which operates with inadequate ideas. It is therefore the task of philosophy, or theology, to prove that they are rational, and this can only be done by showing that in the knowledge of the finite the knowledge of the infinite is tacitly presupposed, though it is not brought to clear consciousness. Dante himself admits that reason can prove the existence of God, though he adds that it cannot comprehend the inner nature of God. But to prove the existence of God is to show that He is manifested in all forms of existence, and a Being so manifested cannot be unknown, much less unknowable. It is instructive to see how in our own day the doctrine of the absolute limitation of the human intellect has by an inevitable dialectic issued in a thinly-veiled scepticism. Sir William Hamilton argued that, as to think is to condition, the Absolute is unthinkable. His follower Mausel went on to show that, whatever predicate we attach to the idea of God, it breaks down in contradiction. Thus for us God becomes the Being of whom we can predicate nothing. Mr. Herbert Spencer is therefore only drawing the legitimate inference when he maintains that of the Absolute we can only affirm pure being. But an Absolute of whom we can predicate nothing is for us nothing, and thus the very idea of the Absolute vanishes away, and the only reality is the Relative. The doctrine of the opposition of faith and knowledge is a perilous weapon to handle, and invariably wounds the hand which wields it. If Theology is to be a real defender of the faith, it must concentrate its efforts upon a purification of the traditional creed, and the elevation of it into a science, which like other sciences needs no external support. The medieval separation of

faith and reason virtually received its death-blow at the Reformation, and if we are wise we shall abandon all attempts to retain it, and direct our efforts to the really fruitful task of exhibiting the essential rationality of the Christian conception of life.

We have seen how Dante draws an absolute distinction between faith and reason, maintaining that by the former we are carried beyond the limits of knowledge, and have therefore to be contented with a simple acceptance of truths which remain for us incomprehensible. How impossible it is consistently to maintain such an opposition becomes apparent from Dante himself, when he goes on to define the nature of God, *i.e.*, to make intelligible what he has declared to be unintelligible. God, he tells us, is one and eternal : himself unchangeable. He is the cause of all the changes in the universe. In the perfect mirror of his intelligence all things are reflected as they really are, but He is not himself perfectly reflected in any. He is thus the absolute concentration of Truth. The "good of the intellect" is to know Him, for to know Him is to know the Truth. He is the supreme Good, and all good contained in other beings is a reflection from Him, and is therefore finite and limited. Hence all created beings, in so far as they comprehend the good, strive to realize it, and in so striving they are seeking after God. In lower forms of being the yearning after God takes the form of a blind desire, in the higher creatures it is expressed as love. As the sun illuminates all things, so the glory of God suffuses the whole universe, but in varying degrees of completeness. The love of God is revealed in all things, but it shines most clearly in the higher intelligences. In God knowledge is absolutely complete : in the "great volume" of his intelligence all is perfectly known, and therefore in his mind there is no process. In Him there is no 'here' or 'there', no 'before' or 'after' : all is an eternal 'now'. As God is infinitely perfect, there is in Him an absolute harmony of Knowledge, Will and Power, just as heat and light perfectly interpenetrate and coincide in a ray of sunlight. Though God is absolutely one, He is in three persons. "In the profound and glorious substance of the high Light there appeared to me three circles of three colors and one potency : and the one seemed reflected by the second, as rainbow by rainbow, and the third seemed fire, which from one to the other is

breathed forth in equal measure." In this imperfect symbol Dante seeks to give some faint indication of the incomprehensible mystery of the Trinity, for of more no human mind is capable. "Mad is he who hopes by reason to travel over the boundless way which holds one Substance in three Persons."

The creation of the world proceeded from the eternal Love of God. For, as nothing can add to the perfection of God, the act of creation is the spontaneous outflow of Love, which ever seeks to reflect itself in new loves. Before creation there was nothing, not even formless matter, but form and matter flashed into being together in a single instantaneous act of creation. Contemplating the whole hierarchy of forms in the Logos, the Creator knew all things ere they were created and loved them with the Son in the Spirit. Thus there came into being the nine heavenly spheres, in which his glory is most perfectly expressed, and by gradual descent the various orders of being, immortal and mortal, until at last it almost fades away in mere accidental and transitory peculiarities. Every created thing is therefore a more or less perfect reflection of the Divine Being, and hence he who apprehends the order or scale of being cannot be altogether ignorant of God. The only beings which are indestructible are the heavens, the angels and the rational souls of men; the first because they have a peculiar matter of their own, the others because they are pure forms. On the other hand, all things composed of the elements, as well as the soul in its lower forms as nutritive or vegetative and animal, imply the temporary union of matter and form and are therefore destructible. Dante's view of the relation of the various orders of being to God as the goal of all their striving is thus summed up. "The whole sum of things displays an order or scale of being,—a 'form' which makes the universe a reflection of God. Herein the higher creatures see traces of the eternal goodness, and this is the end for which the orderly arrangement of beings has been made. According to their rank in the scale of being all things tend by a path more or less direct to their primal source, moving onward through the vast ocean of being to different ports, in harmony with their peculiar nature." Not only has divine Love fixed this scale of being, but it brings all things to their appointed goal, and were it not so the whole universe would fall into chaos. Yet,

though God foresees and orders all things, man as a rational being is endowed with freedom or self-determination.

Even this imperfect statement of Dante's conception of God and of the relation of the various orders of being to God as their beginning and end is enough to indicate the substantial truth of his doctrine. To the man who lived in such a faith life could not be otherwise than earnest and noble. Nevertheless, the theology of Dante is nowhere put to so severe a strain as in its effort to express the nature of God and his relation to the world of finite beings. This was inevitable, because the Christian idea of God seems to combine conceptions which the understanding in its ordinary use regards as mutually exclusive. Thus Dante tells us that God is absolutely one and indivisible, while yet He contains in himself three absolutely distinct Persons. He is absolutely complete in himself before the creation of the world, but the infinite Love which forms his very essence must express itself in the creation of finite beings towards whom his love is manifested. God orders all things, and yet man has absolute freedom of action. Nor can the union of such apparently opposite predicates in a single conception be regarded as a mere attempt to do violence to all the laws of our intelligence; it is the expression of an idea to which the human mind has been forced, in its effort to frame an adequate theory of the universe; and unless we can justify it, we shall have to fall back in despair upon the virtual scepticism which denies that we can comprehend God at all, and thus leaves us with a conviction of the illusive character of all that we call knowledge. It is therefore of supreme importance to look beneath the form in which Dante expresses his thought to the permanent and universal truth which it embodies. That his thought is inadequate in form is indicated by the fact that he continually takes refuge in a mystical symbolism; for symbolism is just the expression of a truth which is felt rather than comprehended.

The inadequacy of Dante's theology, like that of his master Aquinas, of which indeed it is mainly a summary, arises from his attempt to express the Christian idea of God in Aristotelian, Neoplatonic and Jewish formulae. He adopts the Aristotelian conception of God as the "unmoved mover"; the Being who, existing apart from the world in isolated self-completeness, acts upon it from without and is thus the "first cause" of all its changes. The

importance of such a conception as a first step towards the true idea of God is not to be denied. When we contemplate the changes of finite things, we inevitably seek for an explanation or cause of them, and a final explanation can never be found by simply going back along the series of changes, since each of those changes again requires a new cause to account for it. Yet this is the point of view from which the scientific consciousness regards the world, and hence it is not unfair to say that science as such can never give a final explanation of things. This is virtually confessed by Mr. Herbert Spencer, when, having argued that our solar system has been evolved from a primeval nebular matter, he tells us that we can go no further, but must simply accept this primeval matter as a fact. We may accept it as a *fact*, but we cannot accept it as a final *explanation*; and, unless we can satisfy ourselves with Mr. Spencer's "inscrutable mystery," we are forced to seek for a more adequate explanation than he has given us, or any scientific theory can furnish. When, therefore, it is maintained that the true cause or explanation of the changes in the world presupposes a cause which is not itself one of those changes, the reasoning is undoubtedly sound. A cause which is uncaused, or a self-acting being, is a conception which the inadequacy of the ordinary idea of cause compels us to adopt. This idea, in fact, is the basis of all purely monotheistic religions, which seize the truth that the explanation of the world must be sought in a Being whose nature is self-determined. But, while we admit that a self-determined Being is the necessary presupposition of all changes in the world, we must observe that such a Being is a cause only as He is active in the production of those changes. And this is what Monotheism, working with the conception of causality, actually affirms. So long, however, as we do not see all that is involved in the conception of a self-determined Being, we inevitably separate absolutely between that Being and the effects He produces. In other words, the conception of cause and effect from which we started still survives in this way, that the cause and the effect are regarded as two distinct things. Hence we conceive of the self-determined Being as complete both before and after the effects which He produces, or, what is the same thing, we separate God from the world, and having done so, we can only affirm that they are related without being able to

comprehend how they can be related. Yet our feeling of their relation cannot be extinguished, and we attempt to satisfy ourselves with analogies which suggest a relation that explicitly we have denied. This is what Dante does. To supplement the imperfection of the idea of God as the "unmoved mover," acting externally upon the world, he falls back upon the Neo-platonic idea of successive emanations proceeding from God and yet leaving Him alone in his isolated self-completeness. The various orders of being are thus figured, not as manifestations of God, but after the analogy of reflections or images in a mirror. But a reflection or image has no substantial reality. Such a metaphor merely conceals the unsolved contradiction involved in the conception of a Being who is self-determined in the sense of being self-complete apart from the activity which He exercises. If we are really to find God in the world we must be prepared to admit that the world is not something accidental, something which might or might not be, but is the necessary manifestation of God.

It is not only, however, the Aristotelian conception of an "unmoved mover" which hampered the theology of Dante, but also the conception of creation, which he found in the old testament, and which, as a faithful son of the Church, he never dreamt of questioning. For Dante, as for all medieval thinkers and for those who are still at the medieval point of view, the revelation of God was not a series of ever fuller revelations, but a dogmatic statement of different aspects of one unchanging system of truth given at different times. Starting from this preconception, he failed to see that the revelation of God which is given in Christianity transcends the idea of creation and substitutes the more adequate idea of the world as the self-manifestation of the divine nature. The earlier Jewish conception of creation rests upon the idea that God is complete in himself apart from the world, and that the world rather conceals than reveals Him. Nor did Dante even see that the conception of God as creator is not identical with the idea of an "unmoved mover" which he had borrowed from Aristotle. The Aristotelian idea is merely that of a Being who directs the movements or changes of a world which already exists. I do not think it is correct to say that Dante "implicitly accepts" the "eternity of matter," as an able exponent of Dante

maintains*; but, in his continual use of the Aristotelian metaphor of the wax and the seal, he shows that he is not clearly aware of the distinction between a First Cause, or Former of the World, and a Creator. The confusion between these two conceptions may, however, be readily understood if we consider that they agree in conceiving of God as complete in himself apart from the world.

There is, however, another side to Dante's thought. Like Aristotle he finds among finite beings a graduated scale of existence. All contain a spark of the divine nature, and are continually striving towards their primal source. Now, if we fix our attention upon this aspect of Dante's thought, it becomes obvious that it cannot be reconciled with the conception of God as purely external to the world. If in all beings there is a tendency towards the divine, it must be because the divine is immanent in them, unless indeed we suppose that this tendency is only apparent. From the point of view of an external Designer, or even Creator, finite beings can only be regarded as a dead mechanical product; whereas beings whose very nature is to tend beyond themselves, ever seeking for union with God, must contain in themselves, in more or less adequate form, the principle of Unity which is the very essence of existence. In other words, the idea of the immanence of the divine nature in all things, which Dante expresses in a pictorial way as a reflection in them of the glory of God, is compatible only with the idea that they are in some sense self-determined beings. This idea is most explicit in the contention that man is a free being, for a free being cannot be the passive medium or instrument of any other being. At the same time Dante insists, and rightly insists, that there can be no freedom which is exclusive of the infinity of God. But, as the idea of God as an external Artificer or Creator still survives in his mind, he is again forced to take refuge in metaphors which merely conceal the unsolved contradiction of his thought. The only conception which can at all adequately express the true relation of the finite and infinite is that of an organic or spiritual unity, in which the same principle which is present in God as the unity of the whole is also present as the ruling principle in each of the parts. From this point of view we can see that the world is no arbitrary pro-

*Mr. Thomas Davidson in the Year Book of the American Dante Society for 1890-91: p. 58.

duct of the divine nature, but the expression of what that nature essentially is, and we can allow at the same time for the various degrees in which the different orders of being realize the principle of the divine. All beings contain the same essential principle, but only those beings who not only contain it but are capable of comprehending what it is, can properly be said to be identical in their nature with God. And this conception also enables us to allow for the gradual process by which man attains to the consciousness of his unity with God. For, only as he comes to the consciousness of the divine principle which is working in him does he truly understand himself. And as that principle essentially is the identity of all beings in their inner nature with all others, and therefore with God, man can find nothing absolutely foreign to himself; every step in the comprehension of nature, every phase in the development of society, of art, of philosophy, is a fuller revelation of the perfect nature of God. The point where Dante comes nearest to this idea is when he seeks to express the Christian conception of God as Love. For it is of the very essence of Love to go out of itself and find itself in another. An absolutely self-centred Being, complete in himself apart from all other beings, cannot be defined as Love. That conception Dante cannot entirely get rid of, but he virtually transcends it in his interpretation of the doctrine of the Trinity, where he tells us that God brought finite beings into existence in order to find objects in which his own nature should be reflected. If God's very nature is Love, He would not be himself were there no object in which his love is manifested; in other words, the world is the necessary self-revelation of God, not the arbitrary product of his mere good pleasure.

“Freundlos war der grosse Weltenmeister,
Fühlte Mangel, darum schuf er Geister,
Sel’ge Spiegel seiner Seligkeit.
Fand das höchste Wesen schon Kein Gleiches,
Aus dem Kelch des ganzen Wesenreiches
Schäumt ihm die Unendlichkeit.”

JOHN WATSON.

A GREEK PLAY.

PART II. —THE ANTIGONE.

WITH Antigone's speech the Play begins.* Addressing her sister Ismene in the most endearing terms, she reminds her of all the sorrows of their house. A new blow has fallen upon them now. Last night the invading Argives were driven far beyond the bounds of Theban territory. Creon's first act thereafter had been to publish an edict, forbidding on pain of death the burial of their brother Polynices. For her part, she had determined notwithstanding to do her duty. Will Ismene help, and show herself the true daughter of a noble race, or refuse and be a recreant to her lineage? Ismene stands amazed and horror-stricken at her sister's proposal. Are they, weak women, for whom it is as unbecoming as it is futile to war with men, to bring utter destruction on the house of which they are now the sole survivors, by braving the power of the laws and running into certain death? The full pulse of dramatic life and passion quickens even the Prologue of our poet—his opening exposition of the situation. A few bold strokes bring out the contrasting figures of the sisters into sharp relief over against each other, along with the conflicting ethical elements embodied in them. On the one side we see sisterly love and piety, on the other maidenly shrinking from strife, and respect for law. To Antigone it is clear that her sister has been tried and found wanting, has made the great refusal. She will never more look for help from this weak sister, who is henceforth no sister of hers. For she at least has heard the trumpet call of a sovereign duty, whereby all lesser fears and scruples are overborne, and none is father or mother, brother or sister of hers who stands in the way of its fulfilment. Putting from her with contempt the timid counsels of Ismene to act at least with prudent reticence in the execution of this wild design, as well as all cheap protestations of affection, she quits the stage with a movement of queenly scorn. She goes by the door on the

*See No. 2. Pages 147, 148, 150.

left towards the country-landscape, from which we infer that she is making for the place where her brother's body is lying. Ismene stands for a moment sunk in a strange mixture of feelings—horror of Antigone's recklessness, affection for her, and admiration of her uncompromising loyalty—then enters the palace, and so the stage is again empty.

At this point we hear the sound of a flute in marching time, and some brilliantly-coloured figures enter the passage on the right which leads to the Orchestra.* That is the Chorus. They wear the masks of old and reverend-looking men, white shoes, robes rich in texture and colour, and golden or gilt crowns. They represent in this case the Elders of Thebes, the most prominent and venerable of the citizens summoned by the new ruler Creon to meet with him in council. They march past, preceded by the flute-player, fifteen in number in a formation of military regularity, three abreast. That one, nearest us in the front rank, is the leader or Coryphaeus. He is a most important personage, a potent factor in the success or failure of the play. It is his duty to give the singers their keynote, and the signs which direct their often extremely elaborate movements and evolutions. Besides he takes a great deal of dialogue both spoken and sung with the actors on the stage. When the chorus reach the Orchestra and take their places there, they change their formation with great precision so that they are now five abreast and three deep. At a sign from the Coryphaeus they lift up their eyes and hands to the sun still well in the east, and in a burst of song hail his glad rays arisen upon their rescued father-land. They celebrate in splendid swinging rhythm, marvellously varied for expressive effect, the Theban victory, the crushing downfall of their Argive enemies, and give thanks to the gods in jubilant strains. Their song is accompanied by singularly graceful and significant gestures which bring vividly before our eyes the movement and pageantry of war, advance, retreat, tumult of battle and headlong flight. We can see now how much the fate of the play must depend on the efficiency of the chorus. A new atmosphere of rapt and live enthusiasm diffuses itself over the audience as their song proceeds. The poet has known well how to raise all the powers

*See No. 2. Pages 142-43.

of his hearers through the magic of sight and sound to that heightened intensity which he requires for the full comprehension of his play.

After the opening ode has been rendered thus effectively, another sign from the Coryphaeus brings about a right wheel on the part of the chorus. They stand now with their backs to us and their faces to the stage. And now the Coryphaeus pointing to the open door of the palace gives us to understand that he sees Creon coming, expressing anxiety to know with what purpose he has called them the senators of Thebes together.

The mask of Creon portrays stern and haughty features with a deep frown on the brow. It has an enormously high upward prolongation, thick black hair and beard. The tunic is of royal purple with swelling bosom. He is attended by two armed men, wears a crown on his head, carries a richly-adorned staff of office, and looks every inch a tyrant. He has summoned the Elders of Thebes whose fidelity has ever steadfastly supported their rulers, to announce to them formally that it is to him they owe allegiance now, to declare to them the principles by which he means to rule, and to demand their co-operation in carrying out the recent edict—the first exemplification of these principles. “What is in a man,” he says, “can never be known till his quality is tested by rule and law-giving. Whoever cleaves not to the best counsels when the welfare of a whole people is committed to his charge, the ruler who through fear or favour shrinks from prompt action when the general weal is imperilled, is but a poor caitiff. Creon will never be silent when he sees the state in danger, never will he regard as a personal friend the man who is an enemy to the fatherland. Our country is the ship that bears us safe and only when she sails with even keel can we make true friends.” Creon is evidently an example of the homely truth that new brooms sweep clean. He is not going to permit any laxity under his regime. His watch-word is that “discipline must be maintained.” His excellent maxims of state are heartily applauded by the audience, but when he goes on to say that his recent edict is an application of these principles, his words are received with ominous silence. It is felt that there is more impious self-will and narrow-hearted pedantry than patriotism in gibbeting a helpless corpse for the

warning of traitors. The chorus too, though extremely respectful, are distinctly cold in their reception of their prince's intimation. Through their leader who speaks for them, they declare simply that Creon can do what seems good to him; he has absolute power to dispose as he will both of the living and of the dead. They are by no means anxious to assume any responsibility in connection with the decree. "They are too old to watch the corpse" they say. When the King tells them that this office has already as a matter of course been provided for, and goes on to press upon them not to side with the breakers of his law, if such there should be, they waive aside his urgency as superfluous seeing that no sane man will choose to include his own funeral in the burial of Polynices. Creon however who is tormented with the fixed idea of the rigid disciplinarian, and is ready to see a rebel in every bush, thinks it by no means impossible that a disaffected party in the town of whom he has long had his suspicions, might bribe some hardy wretch to strike a blow at his authority by risking death in disobeying his decree. To his narrow mind and cold heart no other motive suggests itself as possible. The thought of Antigone disobeying him in obedience to sisterly love and duty, never once occurs either to him or to the chorus.

The conversation between the king and his councillors is now interrupted. By the door on the left—that is from the country outside of Thebes—enters one of the guards who had been set to watch the corpse. He is of quite mean appearance, dressed like a common man, though he carries a weapon; his mask is not prolonged upwards beyond the natural height, and his stage boots have quite small soles, so that he looks a very insignificant figure beside the towering Creon. He approaches with extreme and ludicrous reluctance. After a most deprecating obeisance, he goes on in a rambling way to say now how sorry he is to be here, how often he thought of turning back on the way, how unfortunate he is in being just the one of all the watchmen on whom the lot fell to come into this presence, till Creon, who has regarded him with lofty contempt and astonishment, at last angrily cuts him short, and bids him tell his story and be gone. Then at a gulp, looking behind him to see that the way is clear, the poor watchman blurts out his news. The corpse has received funeral honors.

It has been sprinkled with dust (enough in cases of necessity), and had the customary libations poured around it. Creon steps back a pace and roars a demand for particulars. The watchman has none to give except such as are totally irrelevant and concern himself, of which he is lavish. The deed, we gather, had been done in the night or early morning before the watch was set; the doer has left no trace of himself. In this mysterious event, the chorus whose secret doubts as to the edict have already been indicated by their cold reception of Creon's announcement of it, think they see the finger of heaven. The Gods perhaps have miraculously interfered to save the body from impious outrage. At such a suggestion, deprecatingly given as it is, Creon breaks out in towering wrath, in the excess of which we seem to see the influence of some lurking doubt whether it may not contain some truth. "What! the Gods interfere in behalf of him who came to burn their pillared shrines and sacred treasures with fire, to rout and ravage in their land and scatter its laws to the winds. Never! There has long been a party in this town who chafe beneath my yoke; they have bribed these wretched guards to do this thing. But by heaven they shall rue their filthy gains. Go back, miscreant; produce the guilty man before my eyes or else death alone shall not suffice for you and your fellows till hung up in chains ye reveal the whole truth about this outrage, so that henceforth ye may thief with better knowledge whence lucre is to be won." After a ludicrous attempt to make the king hear reason, in which he shows a sweet rustic wit by fine distinctions and some quaint play on words, the watchman takes himself off, congratulating himself when Creon's back is turned that he has got away so cheap, and vowing that whether the criminal be found or not the king has seen the last of him.

The stage is now clear again and the chorus facing round to the audience give voice to the thoughts suggested by what has occurred in a wise and beautiful hymn. The daring and resource shown is disobeying the decree with its terrible sanctions lead them to reflect on the ingenuity of man who has conquered the wild forces of nature, made earth and sea and sky and all the creatures that people them his servants, invented language, political institutions and the comforts of settled and social life. "Yea he hath resource for all things man excellent in wit; without re-

source he meets nothing that must come. Only against death shall he call for aid in vain." Happy would he be if he were only as wise and humble as he is ingenious. But as it is, his fertile skill, cunning beyond fancy's dream, leads him to evil as often as to good. Too often, as in the case of this violated edict—with what motive violated the chorus do not yet know—it leads him to break through all barriers and run into fatal and impious collision with the overwhelming force of law and social order. The effect of this ode is to bring prominently before our minds the significance of the dramatic situation. The chorus has fulfilled one of its main functions. As the mouth-piece of the poet it has struck the key-note of appropriate reflection. We feel now the full gravity of the position in which Antigone has placed herself. Whatever be the motives of her act, it has certainly at least brought her into conflict with a fundamental force in human life, the force of organized society and positive law.

After singing this ode the chorus wheel round to the right again and once more face the stage. Hereupon their leader pointing to the country-landscape on the left, sees to his lively indicated astonishment and dismay—Antigone, being led as a prisoner towards the palace courtyard. Next moment she appears, bound, in charge of our old friend the watchman. This time his haste is as ludicrous as his tardiness was before. He bustles forward dragging the maiden after him in evidently pleased excitement. "There she is," he says to the chorus with the air of a man who has cleared up a mystery. "She did the thing you wot of. But where is Creon?" Just as he is wanted, Creon happens to come out attended by his guards. He places himself on one side of Antigone; the watchman is on her other side. There she stands with her noble bearing, the great-hearted maiden between vulgar plebeian selfishness on the one hand and the insolence of self-willed power on the other.

"I'm back again!" says the Watchman, "though I vowed I should never come. There were no lots this time. No one but myself was going to have this lucky find. Here I bring you the maiden who was found doing honour to the corpse. Take and examine her for yourself. But declare me free of blame." Creon can scarcely believe his eyes. This is a quarter from which he

had not dreamt of opposition. His own ward—a woman! “What!” he says, “where and how did you find her?” “She was burying the man. That is all I have to say.” “Do you understand what you say? Do you say what you mean?” “I saw her do it with my own eyes? Is that plain enough?” “But tell me, then, how you took her in the act?”

“It was this way. When I had gone back to the others and told them of your menaces, we went and swept away the dust with which the body had been covered, bared it well once more and sat down on a hill to windward of it. So we watched inciting one another to keep a good look out. This went on till mid-day. Then came a sudden whirlwind filling the whole air with leaves and dust, so that we could see nothing. After it had cleared away, all eyes anxiously sought the body, and behold standing by it this maiden. She had evidently just come unseen and unseeing in the storm to find her work undone. With a sharp cry like a bird in pain who, returned to its nest, finds its brood all gone, she called down bitter curses on those who had done the cruel deed. Then she caught up handfuls of dust, had the body covered again in a trice, and from a fair ewer of brass held high she poured out three libations in due form. With that we rushed upon her. She made no attempt to deny her guilt. So I have brought her here—sorry indeed for her, but of course well pleased on the whole; for, you see, it is my nature always to look out first for number one.”

During this recital Antigone had stood speechless, motionless with her head bowed wearily. She knew that Creon would never understand her. She knew the old senators would see in her simply a passionate and proud spirit—a woman who had gone out of her proper sphere. There was no eye to comfort, no hand to help. Turning angrily to her Creon demands if she admits the truth of what she has heard. She fully admits it. “You may go, then, where you will, free of a grave charge.” The watchman goes. “Now,” in a voice of thunder, “Tell me in one word, did you know of the edict proclaimed by me or not?” “Yes,” says Antigone; “the whole town knew of it.” “You dared, then, to disobey the laws?” “I did”—drawing herself to her full height, with a voice calm, full and clear like a

silver trumpet—"It was not Zeus that proclaimed that edict for me, not such are the laws set among men by the Justice that dwells with the Gods above. Nor did I deem that thy laws were of such force that a mortal could over-ride the unwritten and unfailing statutes of heaven. For their life is not of to-day nor yesterday—and no man knows the hour when they were first set forth. Not through dread of any human pride could I answer to the Gods for breaking these. That I must die I knew without thy edict. To die before my time is no such dread evil that for fear of it I should be false to my dead brother!"

Thus does the weak girl defy the tyrant to his face, strong in the might of love and faith—two powers against which the gates of hell have never yet prevailed and never shall.

On Creon's iron pride and narrow mind her words are lost. She and her sister Ismene shall both die. Ismene however comes upon the stage, and he discovers that she is innocent of disobedience. To her he then softens, but will not listen to her when she pleads for the life of her dear sister, without whom to live is worse for her than death. "What," says Ismene, making a final appeal, "Will you slay your son's bride?" Antigone, it appears, then, is affianced to Haemon—Creon's son. "There are other women in the world, good store," says the tyrant; "I like not a bad wife for my son." "Dearest Haemon," exclaims Antigone, "how thy father wrongs thy heart." During the dialogue between her sister and Creon, she has stood by in silence, not deigning to bestow upon her judge one word. But this last brutal taunt opens the flood gates of wounded love. In one passionate cry—the sole sign of the undreamt of depths of tenderness in her nature, which her proud self-control suffers to escape her, we see that she has made the sorest, the final sacrifice to duty—the sacrifice of her sweet maiden dreams. When she hears Creon coldly speculating on his son's marriage, as an insignificant detail that admits of solutions enough and to spare—she who knows the heart of her betrothed, incapable of falsehood to her, incapable of making any choice but one, cannot maintain her proud silence any longer. "Beloved Haemon," she cries, "how deeply thy father wrongs thy heart!" She is right. Haemon soon appears, wearing the mask which the conventions of the stage assign to lovers—with black hair and pale

complexion. He is in evident distraction. At first he restrains himself, addresses the old man with studied and profound humility, insinuating his arguments for mercy to his bride under the guise of good policy and solicitude for his father's reputation among the burghers of Thebes, who, as he says are with one voice enthusiastically on the side of the pious maiden. But the anger and stinging taunts of the old man, when once he perceives his son's drift, drive the latter finally into repaying harsh words in kind. A scene of the most lively dramatic interest with its crescendo of rising passion, ends at last, in Haemon's flinging off the the stage with the threat that this father shall see his face never more.

When he is gone Creon in reply to the question of the Chorus, informs us what fate he destines for Antigone. A moment ago he had said he should slay her before her bridegroom's face. Now he is cooler. She is to be led to a lonely place, and entombed in a rocky vault, where just so much food is to be given her as shall be ceremonially sufficient to avoid pollution upon Thebes. Thus vainly, thus significantly does the self-willed old man palter, with his conscience. His cruel resolution has unknown to him, received some hard shocks, although as yet the effect has merely been a more fiercely boiling wrath, a more exasperated tenacity. His pride cannot brook to be foiled by a woman, yet that obscure voices whisper within him to pause and walk warily, is unmistakably shown by these elaborate precautions. What a subtle touch of nature is given us here, by the close fine workmanship of our matchless poet. How many, too, in all ages have thus tithed mint and anise rue and cummin, with the most scrupulous avoidance of ceremonial uncleanness, while their hearts were foul and their hands red with innocent blood.

But Creon finds that God is not mocked. No sooner has Antigone been led away to her lonely and slow death, deserted even as the Holiest was in her last hour, her very faith in the Gods, strong and glad as it was, chilled before the freezing shadow of that sunless living tomb, but with two stars still shining for her in the midnight blackness, Love and Duty—no sooner is she gone than Teiresias, the blind old seer, whose word has never yet proved false in Thebes, appears, and warns the King to

desist, commands him in Apollo's name forthwith to free the righteous maiden and bury the outraged body with all honour. If he fail, then doom and woe await him, and that straightway. Creon's anger now bursts all bounds. He shrieks out sheer blasphemies which make our blood run cold. Though his own eagles carry the fragments of the corpse before the throne of Zeus, yet will I never bury it." It is but the last fierce flare of his self-will. When Teiresias has gone, the persuasions of the Chorus, now at last fully convinced that Antigone was in the right, prevail upon him. The high fortress of his adamant pride crumbles into the dust. He hastens away with his own hands to undo his own work. But it is too late. A messenger comes upon the stage and tells us how Creon went to Antigone's tomb, heard a voice of wailing at the entrance of the cave, hurried forward to see an awful sight—Antigone strangled by her own hand, and at her side her despairing lover, his own son, clasping the cold body in his arms. When the old broken man piteously called upon his name, the young man leapt up with the last spring of a wounded lion, drew his sword and madly ran at his father. Missing his aim, with a sudden frenzied revulsion of feeling he plunged the blade in his own heart and fell upon the body of his dead love, crimsoning it with his blood. The wife of Creon has heard this woeful tale. Without a word she enters the palace. Next moment Creon comes bearing a sad burden his son's body. His cup is not yet full. A servant comes to tell us that his wife has done herself to death cursing him with her last sighs. Behold his house is left unto him desolate.

"Wisdom" sings the chorus as they march out, "is the supreme part of happiness. Reverence to the gods must be inviolate. Great words of prideful men are ever punished with great blows and wisdom's lesson is learnt at last."

On this stage we have witnessed not the mere conflict of human wills, but behind these the conflict of two great elements in the moral life of humanity. On the one hand there is the power of organized society embodied in Creon—the ruler, as his name means, the visible depository of a force august, indeed, and venerable, rooted in the divine constitution of things, but not seldom coming into collision with the individual conscience in

cases where the latter is the fuller expression of the Universal Reason. On the other hand there is that yet higher, diviner power which speaks to each man directly in the depths of his true self, and points him the way that he must go, if he is to live at peace with God and his own soul. The first of these two powers has a voice of terror to which no one can wholly turn a deaf ear; the second has but a still small voice, and few there be that hear it, but to these chosen few the clear tones of its quiet insistence prevail over the coarse thunders of the louder voice. These are the men and women of Faith; to whom the things that are seen are temporal the things that are unseen eternal.

Of such is Antigone. The thought of all she must dare, and suffer and forego, cannot make her false to the clear inward light. Her brother's body lies unburied. Like a naked child in the darkness, his unhoused wretched spirit wails in the under-world with bitter complaints against her neglect. She hears these cries, because the ears of her spirit are not stopped; they will ring in her heart till she dies. At all costs she must quiet the importunate tumult. "But," urges the tempter with fair-seeming sophistry, "will she then be called a breaker of the law?" Antigone is no rebel; there is no perverse itching in her blood to measure herself against the force of authority. To break the law is a grievous thing for her. But if she be a breaker of the law, it is only of the lower in obedience to the higher; therefore at worst she shall be a "sinless criminal." Nay, not even so much as that; for this which she breaks is no law; it is not the voice of Thebes; it is after all but the empty breath of an impious and foolish man so vain of his dress of little brief authority as to think that he can override the primal charities of the soul, the unwritten and unfailing statutes of heaven. Must she then die? whispers the treacherous voice within her once more—she so young and so unwearied while life whose dearest joys she has not tasted yet, might still be so sweet to her. Must the darkness close around her before ever she has seen the dawn of her bridal morning? Yes, she will even die rather than be false. Death must come soon or late, in any case. Soon or late she must join her dear ones, stretched so long on the rack of this tough world, but now at rest—her blind old father whose exiled steps she had guided

with such patient ministry, her unhappy mother, and her two ill-fated brothers, friends now surely in that land where all earthly strife is hushed. They shall welcome and commend her, they with whom she must dwell for ever. It matters little, then, what men shall say of her. Beyond such short-lived clamour, she sees and makes her appeal to the Tribunal in the still Eternity.

Using the expression of the man who reflected most deeply and sympathetically on the noble art whose purest and most pathetic exemplar we have just witnessed, we may say that the terror and pity, which have shaken and melted our souls in the moving scenes and passionate music of this drama, have been truly of a purifying and ennobling kind. We rise subdued indeed and concentrated, but with a joyous sense of expanded power ; a loftier assurance of the divinity of our common nature. It is then no mere dream that there is an Infinite in man. It is given to him to follow duty in war with principalities and powers and spiritual wickedness set in high places, though he be alone, without applause or sympathy, stumbling onwards with energies flagging and benumbed in the chill shadow of death, where all other lights are lost ; yes the very face of God. "Tasks in hours of insight willed, Can be through days of gloom fulfilled." For a little while we have left the poor corner in which our daily life is passed, with its weak unworthy pity of ourselves and others, its sordid fears. Borne up on the strong wings of the poet we have walked in high and holy places. The immeasurable heavens with their steadfast stars have opened above us ; and glimpses have come to us of the deep hidden pillars of the world, so hidden, yet so real, the irrefragable divine laws, "the unwritten and un-failing statutes of heaven."

THE EARTH, AND THE PHYSICAL UNIVERSE.

BY N. F. DUPUIS.

THE past duration of this earth, and in fact that of the sun and of the whole solar system, for these are necessarily very intimately connected, form at the present day a sort of battle ground between the experimental physicist on the one side and the geologist and the biologist upon the other. This battle has been carried on for some years past, and it does not appear that victory as yet inclines very decidedly to either side. And it is quite possible, nay, it is almost certain that no reconciliation can ever take place between the views of the contending parties unless some of the generally received doctrines in regard to the forces of the universe, or at least in regard to their modes of action undergo a very material change.

The physicist and the geologist both to some extent pursue their investigations along the same lines, and base their arguments upon the same foundation. They both draw their conclusions partly from things as they appear to be *now*, and partly from assumptions as to what they were in the far distant past. Both assume the unchangeability of the laws of the universe, and both believe in a uniform application of these laws throughout all time and space, admitting of course, that intensity of action must always be a function of co-existent conditions. And yet their conclusions are so very different as to be altogether irreconcilable upon any theory of accidental oversight in consideration or enumeration of the almost endless variety of energies which come into play.

The physicist says that this earth cannot be above 10 millions or even 8 millions of years old, and that it is probably not more than 4 or 5 millions of years, or possibly less, since it became fitted to be the home of living things. The geologists, upon the other hand, and along with them must be counted the biologists, have claimed as a necessary duration of this earth since the oldest geologic age, a period embracing all the way from over 600 millions of years to one of 4 or 5 millions.

The physicist may be said to have the best of the argument in one respect, namely, that all physicists are pretty well agreed as to the duration of the earth, while the geologists are as wide asunder as the poles. This however is largely due to the fact that the data upon which the physicist forms his conclusion are almost infinitely less complex than those which fall to the lot of the geologist, and that as a consequence there is less opportunity for wild speculation, and flights of the imagination in the former case than in the latter.

On the other hand, while the physicist depends upon the laws of nature as he sees them manifested and understands them *now*, and, upon the assumption of the uniform operation of these laws throughout the millions of years that are gone, an assumption which may possibly be very far from the truth, the geologist has continually spread out before him the infallible and unchangeable record of the past, written in the rocks and everlasting hills. The great book of the history of all past terrestrial change lies open at our feet, but its language is so strange and unfamiliar, and there are so many elisions, so many breaks in the record, here a word left out, and there a whole sentence, and there are so many ways of filling in the omissions, so many interpretations that can be given to almost every complete or incomplete sentence, so much uncertainty in regard to the meanings of things which transpired millions of years ago, that the geologists may well be excused if individual ones differ extremely at times in their interpretation of this written record; and as far as I am aware the leading geologists, with few exceptions, are not willing to accept anything like so short a life-period of the earth as the physicist is willing to grant to them. To present as fair a view as I can of the arguments upon both sides of this disputed question, and to advance a speculation, which might possibly be true, and which if true would be a means of reconciling these very great discrepancies, is the object of this article.

The arguments of the physicist are founded chiefly upon the known laws of Thermodynamics.

The universe is constituted of matter and energy; even life is possibly some occult form of energy, occult, because we are not certainly acquainted as yet with the laws of its transformations.

As to the real and ultimate nature of matter we know but little, probably almost nothing accurately. But all observation and experiment, chemical and physical go to prove that matter is indestructible and therefore in all probability eternal, at least we must hold this until some cogent reason appears for holding the opposite, and that matter is certainly possessed of at least one inherent property, that of gravitation, or the property of attracting other portions of matter and of being attracted by them.

All changes taking place in the matter of the universe, or in its configuration, whether here or in the distant stars, are due to forms or modes of action of energy, such as attraction, repulsion, radiant energy, heat, electricity, etc.

The energy of the universe, however it may be changed from form to form, is, upon the whole, unchanged in amount. But it has a tendency to undergo a transformation into heat as its final and most widely diffused form.

Matter in motion is one of the commonest examples of kinetic energy. This motion cannot be destroyed except by opposing to it some form of resistance, and the apparent destruction is only the transformation of the energy belonging to it into some other form of energy, usually heat.

The coal which burns in the furnace of the boiler gives off heat by its combustion. This heat is due to the falling together of the minute constituent particles of the coal and those of the oxygen of the air which passes over and through the burning fuel. Here we have an example of heat being evolved by mechanical action, usually called chemical, between the constituent particles of certain forms of matter. All combustion comes under this head, for in all cases combustion is the union of particles which were previously discrete.

The heat acts upon the water in the boiler to drive its particles asunder, to change the water into a gas, and thus to give us energy in the form of the expansive power of steam. This expansive force moves the machinery of the engine, and we have here come to mechanical motion, not confined to a few particles, but to great concrete masses of particles.

The engine drives the dynamo, and the resistance experienced by the armature in revolving in a magnetic field is transformed

into that particular kind of energy which is known as a current of electricity, for this name will answer as well as any.

The electricity is carried along the trolley wire, separated from its home in the great body of the earth beneath by the intervening air. In the particular location required it passes down through the motor of the car and develops again mechanical power in the form of a moving mass, or being passed through the Edison lamp, becomes light and heat; although, light, being merely a subjective phenomenon has really no business in this sketch of energy transformations. And what finally becomes of the energy of the moving car? Some small amount of it may reappear as electricity or magnetism in the wheels and iron rails, but the great mass of it is changed into heat, by friction on the axles and rails, by friction on the brake, by friction on the surrounding air, and in other ways, and this heat, so far as we can at present see, is lost forever by being radiated and dissipated into the boundless regions of surrounding space.

When the blacksmith's hammer falls upon the anvil the motion of the hammer is destroyed, and its energy as a moving mass is transformed into heat; and it is well known to almost every one, that a piece of iron can be quite strongly heated by beating it with a hammer upon an anvil. So also every raindrop and snowflake that falls to the earth imparts its quota of heat to the surrounding air. So every meteor which leaves it fiery trail for a few moments athwart the sky is a visual and vivid illustration of the conversion of motion into heat. The meteor meets the earth's atmosphere at a great height, and with a velocity anywhere from 20 to 50 miles a second. To a body moving with such speed even the higher and rarefied portions of the atmosphere offer a powerful resistance which rapidly changes the motion of the meteor into heat. The whole mass fuses, and, if small enough, becomes dissipated into a glowing vapor, and leaves a fiery track of ashes to mark its path, or if of considerable size, it may burst into many pieces with a cannon's noise, and its several parts fall to the ground and bury themselves to a greater or less depth therein.

The relation between the destruction of motion in a moving body, and the resulting generation of heat, has been most carefully, and experimentally worked out by the leading physicists of

the century, among whose names that of the late Mr. Joule must ever hold a prominent position. It has been shown, with a very small probability of error, that if a pound of any heavy matter, such as lead or iron, etc., be allowed to fall freely through 772 feet at any place near the earth's surface, the amount of heat generated by the destruction of the motion, is just sufficient to raise one pound of water through one degree of temperature on Fahrenheit's scale, or, in other words, if 180 pounds of matter should fall under the same conditions, sufficient heat would be generated to raise a pound of water from the temperature of freezing to that of boiling.

Now a fall from a height of 772 feet, means a velocity of about 223 feet per second, so that a body moving with this velocity has sufficient energy if it be of iron, to raise its own temperature through about nine degrees F. and if it be of lead, through about 32 degrees F. Finally, if this earth could meet a solid body at rest, the rise of temperature due to the concussion would be somewhere near 600,000 degrees, a temperature many times greater than any ever produced by artificial means. And thus when we know the velocity at which a body is moving, we know the rise in temperature which would be effected by the destruction of its motion by collision with some other body.

In the immensity of spatial depths, the telescope reveals to us great numbers of small, faintly luminous and hazy spots, of various sizes, and of various shapes, usually illy defined in outline but clearly distinguished from the single stars in appearance. These glow with a very faint and uncertain light like minute comets, and instead of being apparent points like all the fixed stars, they have in general a pretty distinct and fixed form which may be quite regular, as circular, elliptical, etc., or which may be very irregular as in the great nebula of Orion.

By means of powerful telescopes and also by the spectroscope some of these have been shown to be nothing but clusters of an immense number of apparently minute stars, so extremely distant as to be altogether invisible except in the largest and best of telescopes, and so crowded in space that their combined light causes them to appear as a faint nebulous spot. The majority of these comet like bodies, however, have never been resolved into stars, and we have reason to believe, from spectroscopic re-

searches, that no possible telescopic power would be sufficient for such a resolution. These form the true nebulae.

We do not know the distance of any one of the nebulae, but they are in all probability more distant than the nearest fixed star, and possibly thousands of times more distant; and the nearest fixed star is more than 20,000,000,000,000 miles distant, and no other star is within about double that distance.

Of the real extent of a nebula then, we can form no idea, for the extent is a function of the distance, but the smallest observable nebula must be millions of times more extensive than the whole solar system.

It is believed by many astronomers that to a person placed so far distant that our sun would appear as a star, it would also appear to be surrounded by a faint nebula, inasmuch as something like a nebulous haze, known as the zodiacal light, is apparent, as a constant attendant upon the sun, even to dwellers on the earth. The true nebula consists of cosmic matter, which is the stuff from which comets are formed, and which is in all probability the crude material from which this solar system, and other suns and planetary attendants have been, and are being built up.

We know something of the nature of this cosmic matter, as a considerable portion of it falls to our earth from year to year out of surrounding space, and sometimes in quite large masses, forming meteoric stones.

As far as we understand its nature a nebula is a cosmic cloud consisting of an incalculable number of particles of solid matter, just as, on an infinitely smaller scale, a storm cloud consists of innumerable particles of minute water drops. The particles which go to form the cosmic cloud may range all the way from dust grains to metallic or semi-metallic masses of pounds or tons in weight, the particles being, on the average, exceedingly far apart in proportion to their size.

There is not the smallest reason for believing that in these distant regions of the universe the properties of matter are in any way different from what they are with us. But detached portions of matter cannot remain at rest in space. Motion is the great law of the universe. Everything from the constituent molecule to the astral system is in incessant motion. The parts of the

cosmic cloud attract one another with forces varying inversely as the squares of the distances between them, and directly as their masses. Hence every particle great or small must pursue some kind of an orbit due to all the attractions acting upon it. This orbit must, under the circumstances, be in the main most singularly complex, the orbit of one particle being possibly very different from those of other particles. Owing to this irregularity of movement, these moving bodies must sometimes come into one another's way and collisions must take place. But the destruction of motion by the collision produces heat, and probably some parts, at least, of the colliding masses are torn off and so strongly heated as to be gasified and form a glowing vapor, to which the faint luminosity of the nebula is due. This vapor would, unless under certain circumstances, cool and condense more or less rapidly into a small portion of cosmic dust. The rapidity of cooling would depend upon the state of condensation of the nebula, and under a fairly condensed state the heat so formed would go on increasing, instead of decreasing, and the nebulous mass would gradually grow hotter and brighter.

But the collision would have another effect. The colliding bodies being checked in their motions would yield more readily to the central attraction of the whole mass of the nebula, and be thus drawn inward to pursue a diminished and possibly a more irregular orbit, besides becoming a sort of stumbling block to other particles.

The consequence would be a slow gathering inwards of all the particles of the great nebular mass, a sort of condensation, which, by increasing the frequency of collisions would increase the amount of heat developed and thus raise the temperature of the nebula while decreasing the distances between its constituent parts. But this decrease of intervening distances, this falling in of particles from the outer parts of the great cloud to positions nearer to the centre, must, according to the mechanical theory of heat, produce a constant rise in temperature, a rise which must depend, among other things, upon the distance through which the particle has fallen. And thus after a very long time, a time so long as to transcend man's powers of comprehension, the great nebulae of the universe must one after another grow hotter and brighter, and more circumscribed in extent, until their constituent

particles finally come into that form which we know as a central sun and its retinue of attendant planets. Or possibly in some cases of irregular nebulae, there may be two or more centres of condensation giving rise to two or more suns which revolve about one another, as is actually to be seen among the mechanical wonders of the heavens.

Such is believed to have been the origin of our solar system, the sun representing the main bulk of the primitive nebula, and the planets being parts which were gradually left behind in the great gathering in.

And thus the heat of our sun is but the transformed mechanical energy due to the falling in, towards a common central mass, of the innumerable hosts of bodies great and small which at some time in the distant past were scattered throughout the wide extent of a diffused nebulous cloud.

But heat is a measurable quantity. And we know the mass of the sun measured in our customary standard units, and hence the amount of heat generated by the great in-falling of the original nebular mass is determinable to a fair and practicable degree of approximation, the result of the determination being probably in excess rather than in defect. Also we know, even to a closer degree of approximation, the rate at which the sun is at present giving off its heat, and thus the question as to how long the sun has been giving out heat, at its present rate, or how long it can continue to do so, is to some extent a mere question of receipt and expenditure.

Reasoning along these lines, leading physicists have arrived at the conclusion that the sun has not been giving off heat for a probable period of over twenty million years since our earth became an independent globe, and possibly for a period of not more than ten or even eight or six million years, since the earth became inhabitable and inhabited. And thus the physicist practically says to the Geologist and to the Biologist, if our physical theory is correct, and we see no reason for believing otherwise, then all the great changes which have left their history in the earth's crust, the stratifications, and denudations, and upheavals, and all the development in plants and animals, and all extremes of evolution and variation, must have taken place within the last five or six million years.

There is no assurance, that the assumption that the sun has been giving off its heat at a uniform rate during long past ages, is correct, but no reasonable amount of variation in this rate could lengthen out the time allowed by the physicist into anything like that necessary, or said to be necessary by the average geologist. However, it may be worth while to enquire briefly into the probable condition of the sun.

According to Lardner and Dunkin the attraction at the surface of the sun is about 28.6 times as great as the attraction at the surface of the earth; that is to say that a man who weighs 150 pounds upon the earth would weigh 4,290 pounds, or over two tons at the surface of the sun, and would thus be literally crushed to death by his own weight. One would naturally suppose then that this powerful attraction exerted on all solar matter would compress it to a wonderful extent and thus raise the mean density of the sun far above that of the average material of this globe. The very reverse is however the case, for the mean density of the sun, instead of being greater than that of the earth, is only about one-fourth as great; so that a cubic foot of average material taken from the earth is as heavy as four cubic feet of average material from the body of the sun. What explanation can be given of this unexpected comparative result?

It follows then that no great portion of the sun can be solid or even liquid, for the specific weight of any substance, with which we are acquainted, is not much different in its liquid state from what it is in its solid state. But if we assume that only a comparatively small portion of the sun is in either or both of these states, it follows that a very great portion of the sun must be in the gaseous state. It is, however, difficult to conceive how an atmosphere consisting to a considerable extent of the gasified forms of heavy metals like iron and nickel should have a height of some hundreds of thousands of miles, and yet not be compressed into a liquid by its own superincumbent weight.

We know as a fact that under our conditions of life there is a critical point for every gas; that is a temperature above which no pressure that we can bring to bear upon the gas will convert it into the liquid state. If while under this pressure the temperature be gradually lowered until the critical point is passed, the gas in

a very peculiar way passes into a liquid filling something like one-half or one-third the original bulk. But what are the little pressures and temperatures which we are able to command as compared to those which must exist in the interior of the sun. And yet it would seem that a condition something like that now described must be present in the solar mass.

It is probable then that the sun's temperature is so high as not only to keep every portion of matter in a gasified state, but to absolutely prevent anything like chemical union. So that all the elements of the chemist must exist uncombined, in the body and in the atmosphere of the sun, and certainly some, and possibly many of these so called elements exist in a state of decomposition into simpler constituents, either known or unknown.

This view of the matter, and no other one appears to be compatible with observed facts, makes the sun to be a great sphere of gas about 800,000 miles in diameter, in which all our most refractory substances are held in the gaseous state, and at a temperature so high as to be far above the critical point of the most readily condensable of these gases.

Now if this is so, then it has been shown by Mr. Lane that the sun in contracting will, as long as it retains its gaseous form, grow hotter instead of cooler. So that upon this theory of its constitution the sun did not give off its heat at a faster rate or even at the same rate several million years ago as it is doing now, but probably at a much slower rate. This supposition would of course tend to lengthen the time during which the sun has been supplying heat to the planets of the solar system.

If, as is generally believed, the earth were intrinsically hotter several million years ago than it is now, it could maintain a temperature fit to support life on its surface with less assistance from the sun than at present; and as the earth gradually grew cooler by giving off its central heat, so the sun grew hotter by its own contraction, and thus the surface temperature of the earth might remain very much the same for a very great length of time.

This might lengthen considerably the period during which the earth has been the home of living things, but it could not extend the time to anything like two or three hundred millions of years.

(TO BE CONTINUED)

DOES HISTORICAL CRITICISM DO VIOLENCE TO SPECIAL REVELATION?

IT is claimed by "higher critics" that we must read Holy Scripture, as we read other literature, in the light of human development revealed in history; that the different books of the Bible must be received in their historic setting; that the doctrinal contents of these books must be put in proper historical perspective; and that due allowance must be made for the temporary influences which, from time to time, magnified special phases of truth out of due proportion, or even incorporated into Scripture conceptions and regulations which were local and temporary, but which are now of little more than antiquarian interest.

On the other hand, it is claimed by those who are styled the "orthodox party" that Holy Scripture cannot be thus placed on the same level with other literature, and subjected to the same canons of historical and speculative criticism. The Bible, they hold, is a wholly unique book, in that it is not the product of the human mind, but embodies a special revelation of God to the human consciousness, or contains truths which man could never have attained by means of his own unaided reason.

If any lasting reconciliation is to be attained between these two parties, it must be through such a common understanding regarding the meaning of special revelation, on the one hand, and the legitimate sweep of the methods of historical and speculative criticism on the other, as will do no violence to the essential worth of either. This understanding must allow for the Divine Inspiration of the writers, and at the same time allow scope for the reflective spirit of readers and interpreters to bring the content of the special revelation into harmonious unity with other phases of human experience. The devout mind has a right to reject such criticism as will not allow for the Divine Inspiration of the sacred writers; while the equally earnest reflective student has the same right to demand relief from such a conception of the authority of Revelation, as would destroy the possibility either of

ascertaining exactly what the inspired writers themselves said, or of distinguishing between the essential spirit of their message and the temporary form and mould given to it by the spirit of different ages.

Hence we must look for such a relation between the knowledge we have acquired through the common activities of the human mind, and those intimations and intuitions received from the Divine mind, as will make it possible to bring both into the same web of human experience. This can be done only by looking for the conditions involved in our possibility of knowing anything.

If Special Revelation means anything for us at all, it must mean revelation to human consciousness, no matter how we may disagree as to the method by which it comes, and its likeness or unlikeness to "Ordinary Revelation" or the faculty to which it appeals. If we hold that it appeals to faith as distinguished from reason, and is "spiritual" as contrasted with "intellectual," we must at least presuppose such a unity between faith and reason, between our spiritual and intellectual faculties, as will allow the Special Revelation to influence us in our distinctively human activities.

If we hold that, to be Divine, a revelation must come in a supernatural way, in the sense that we can never account for it adequately, as we can trace the causal connection between natural events, we must at least affirm, that, although its origin is inscrutable, its content must be capable of becoming a part of human knowledge.

And since by Special Revelation we mean a revelation to man, we certainly imply that it must be translated into the language of man's consciousness. This is the same as saying that it must conform to the conditions of human knowledge. Even its inscrutable origin cannot obviate the necessity of its conforming to those conditions without which we could know nothing.

"But," it may be asked, "have we a right to speak of possibility or impossibility with reference to God?" A little consideration will, I think, make it plain that we must so speak, in spite of the fact that in a sense "all things are possible with God."

Scarcely anyone would consider it impiety to say that it is impossible for God to make two straight lines enclose a space. Even

though Supernatural power could so operate upon the human mind as to produce a state of consciousness in which two straight lines might be seen to enclose a space, it would imply such a change in our faculty of knowledge as would destroy the identity of the knowing subject. It would imply such a break in his experience, as would destroy his identity as the same subject in his different experiences. Consequently the knowledge which he would attain in such a supernatural state, could not be carried into his normal consciousness as a natural man. If the possibility of making two straight lines enclose a space, therefore, would destroy the identity of the subject of knowledge, as he passed from the supposed experience in which "all things are possible" to the normal experience in which the contradictory is impossible, we are justified in saying that not even the Supreme Being can give such a revelation to human beings. It is only that revelation therefore which is possible to human consciousness, *as we know human consciousness to be*, that we have any right to speak positively about; for even when we speak of "Special" Revelation, we must mean such a revelation as conforms to the conditions of human knowledge.

It would thus seem that we are justified in saying not merely that there are things in connection with Special Revelation which can be pronounced impossible without the implication of any limitation of God's true character, but that there is one necessary condition at least to which Special Revelation must conform in order to be a Revelation *for us*. That condition is, that Special Revelation must not make an absolute break in the unity of the consciousness to which it is given.

If this first principle is ignored, the supernatural must be separated from the natural; and as the Divine mind will be restricted in its influence on man to his non-rational states, it cannot influence him in any of those activities in which he is essentially a man. And the condition, necessary in order that the influences of times of spiritual elevation should permeate the whole life and thought of the individual, must not be ignored if the inspired individual in turn is to influence the race. Inspiration must not so destroy the unity of consciousness, underlying separateness of personality among men, as to destroy that communication of mind with mind by which we are able to learn from one another. We can find an analogy in poetic inspiration. The true poet's glimpse

into what Goethe calls "the open secret" of the universe, is always in a measure inscrutable even to himself. Inscrutable indeed to others is the flight of his soul, inasmuch as they are incapable of the same vision except through him as a medium. But presented in the "rapt unreasoned form of poetic utterance," and not professing to do more than represent one of the individual poet's moods, it is welcomed by reflecting men as appealing to latent faculties of their own, and as capable of being translated, in a measure at least, into their more tedious language of logical reflection. This is what Carlyle means when he says that "a vein of poetry exists in the hearts of all men", and that "we are all poets when we read a poet well." The inscrutability of poetic flight, therefore, like the Divine inspiration of the prophet, must not so separate him from his fellow mortals, that they shall not be able to catch his fire, to feel its glow in their own bosoms, and to body it forth in their own more prosaic forms of thought.

So we may lay down as our first principle, *that by Special Revelation we must not understand such a revelation as by its process of entering the human consciousness would destroy the identity of the subject of revelation either in the individual or in the race.* That is, Divine Inspiration must not so destroy the unity of the personality of the subject, as to prevent his bringing the new truth into his ordinary consciousness, and into such relation to his ordinary experience, that both "special" and "ordinary" revelations may become parts of one organic whole. Otherwise the influences of the Mount of Transfiguration could never elevate and stimulate life in the world below; and the beatific vision could never become the heritage of those who had never themselves been specially led apart by the Divine Hand up the high mountain.

Thus even though we believe that the "holy men of God who spake as they were moved by the Holy Ghost," came into a peculiarly close contact with God, we see that there are conditions of human knowledge which must have been fulfilled in them before the message could have had any meaning for themselves, or could have been passed down to us. And the condition we have pointed to, that Divine Inspiration could not destroy the unity of experience in the inspired man, lying as it does at the basis of all knowledge, depends on no uncertainty of experience, or no dubious

historical testimony, but is a fundamental principle which all must admit no matter how great the separation which they make between "ordinary" and "special" Revelation.

But let us now see what our position implies on the part of the *content* of Special Revelation. Identity of the subject means continuity of experience and therefore cannot admit of explicit contradictions in the material of his knowledge. So we come to a second principle, that *Special Revelation must not contain explicit contradictions, either within itself, or in its relation to our ordinary experience*. That is, both Special and Ordinary Revelation must be of such a nature as to allow the subject to look upon both as parts of his personal experience. If two separate visions absolutely contradicted each other, or if the content of his vision contradicted all that he was most certain of in ordinary experience, he could not really believe both. No Supernatural Revelation, for example, can convince us that the same conduct is both right and wrong under the same conditions and with reference to the same thing. To admit such would be to admit the total imbecility of our God-given faculty of knowing; and the supreme good would be deliverance from the desire to know anything. All who assert anything, including those who make a denial, assume implicitly the possibility of knowledge. But how can we call that knowledge which may at any time be totally withdrawn by a Revelation from God? True "we know only in part," but there must be a "part" at least which is absolutely true and which no Supernatural Revelation can overthrow.

Of course this is not to be understood as an assertion that we learn nothing which is not at once seen to be in perfect harmony with past experience. We do not in everything learn by the logical method by which we proceed from the conception of a straight line to the truth that two such lines cannot enclose a space. The conception of God as a "magnified man," for example, may be satisfactory to an unreflective man who never thinks of bringing this conception into consistent relation with the thought of Him as Omnipresent.

In poetry, in art, in morality as well as in religion, new gleams of truth, new demands of duty and new aspirations come in upon us, and powerfully influence us before we are able to trace minutely the connections between the new and old, or see their

implied elements of harmony or contradiction. But when once a clash has taken place in experience, or when cool reflection has raised the question of the consistency of the new and old knowledge, no mental rest and no long-sustained serious moral endeavor can exist until the apparent contradictions are removed.

Nor does this harmonizing process necessitate definite and explicit knowledge of all that is contained in the new and old phases of knowledge, or a complete grasp of their mutual relations. We can never fully trace the origin of a thought, or say absolutely that a man is the product of his time. Thus we have constantly to pause as we touch the Supernatural. But so far as we do go, in reducing the facts of our experience to systematic order and definiteness, we can admit no explicit contradictions. Hence we must reverse the method too often followed in dealing with the content of Holy Scripture: instead of refusing to attempt to solve apparent contradictions because we believe them to be contained in Divine Revelation, we must assume that the apparent contradiction is due to our inadequate point of view, and make every effort to get a point of view from which we can see the consistent harmony of the essential truth in both. Consequently when we approach Holy Scripture we must assume that it is essentially harmonious, that we are able to understand the mind of God, and that the evidence of the truth is not the inscrutability of its origin or the mere fact that it has a place in the Sacred Canon. We must look for other more reliable principles of interpretation than our subjective impressions, and for a more infallible guide in their application to life than the authority of any Church or creed.

Once more let us take a definite example, in order to illustrate the application of our principle, as well as to make it more precise and specific. If Paul was certain of anything it was that the Gospel he preached was not from man but a Divine Revelation. He frequently refers to the theophany which appeared to him on the way to Damascus. Yet he does not make the inscrutable nature of the vision his sole criterion of its Divine nature, or the guarantee that it could never be supplanted by another Gospel. He says to the Galatians (ch. 1: 8): "Though we or an angel from Heaven preach any other Gospel unto you, than that which we

have preached unto you, let him be anathema." If the inscrutable circumstances connected with the first dawn of the truth in his mind had been his sole guarantee of its absolute truthfulness, he could not assert that not even "an angel from Heaven" could supplant it.

What then must have been the criterion of the truth in Paul's mind? If the miracle was not the witness to the truth, it must have been the nature of the new truth itself. And this is not surprising when we realize how little the impressions of our senses have to do in producing our profoundest convictions. Visible appearance is almost nothing as compared with the evidence of reality which comes through reflective comparison with the rest of our experience. No Supernatural messenger could convince a sane man that an immoral act would be right. Hence it must have been the feeling that the new Gospel included in its spirit all that was good in the old and at the same time transcended it, which confirmed the Supernatural Revelation vouchsafed to Paul on his way to Damascus.

And it is the more certain that Paul's criterion of the Divine nature of the new truth was its internal evidence, and not its external accompaniments, when we remember that the new Gospel which not even another supernatural messenger could supplant, was itself a supplanter of many details and forms in the old dispensation which he also considered divine. His whole argument against Judaism is based upon the principle of development. Law and rite and ceremony had served their day. Having passed the stage of tutelage man was now to be freed from external authority, and governed by the truth itself which would make him free. Without the conviction that Special Revelation was accommodated to human development the relation of the old and new revelations would have been that of contradiction. But in the light of development the new became at once the supplanter and fulfilment of the old. But Paul could never have become the medium of such a new revelation had he estimated truth merely because of its external miraculous attestors. These had to be subordinated to his judgment of the power of the revelation to meet the want of his time.

And so we come to our third principle : *although we believe in Special Revelation, we are not to look for its infallible test in the*

inscrutable circumstances of its origin, so much as in its transcendent power of meeting the truest need of its time.

This power will show itself by the new incorporating into itself the spirit and vitality of preceding revelations, and at the same time transcending the old in the power of meeting new mental, moral and spiritual requirements.

But what does this imply on the part of the reader and interpreter of Scripture? What did it imply on the part of Paul as a reader of the Old Testament? Certainly not the belief that every Special Revelation in command or institution would be perpetually binding on men. Certainly not that every detail of doctrine, form and ceremony was of equal value. If so he could never say: "we are no longer under law but under grace," and deliver a message which was in many ways destined to supersede laws and institutions of the old dispensation, though they had been established with the authority of "Thus saith the Lord." On the contrary it was his sense of historic development, and his freedom from merely external authority—*i.e.* from authority which did not work *through* his judgment—which was the secret of his liberation from Judaism, and which made him sensitive to the Holy Spirit's new message to his time.

And this must be the attitude of every student who would have a comprehensive knowledge of Holy Scripture. Brought face to face with Divine mystery, like Paul he would pray: "Lord what wilt thou have me to do," and at the same time use all his God-given faculties and attainments in reading God's messages to men in the past. He will thus read, not solely in the flickering light of feeling, not merely with reverent awe of Sacred Writing, but in the rich many-rayed steady light thrown upon the sacred page by literature, art, science, and philosophy. In a word his progress in the knowledge of Divine Truth will be in proportion as he is *both* consecrated and cultured.

Thus we come to our fourth and last principle: *Special Revelation, having been accommodated to the changing needs and circumstances of the race, must be read in the light of the different phases of human development.*

But this is practically all that is claimed by the more moderate advocates of Higher Criticism. So that we certainly cannot say

that Historical Criticism does violence to Special Revelation. If the conditions which we have pointed to are conditions that must be fulfilled before a Special Revelation can be received or understood, Historical Criticism does the very opposite of violence to Special Revelation. It rather gives it the strongest claim, to belief and obedience, by showing its vital connection with the past development and present requirements of men. It enables us to penetrate the hard rind of tradition and mechanical interpretation, and feed upon God's "Living Bread." It raises us above the confusion of changing and conflicting details, incident to a localized study of Scripture, and gives us a glorious view of the same Eternal Spirit constantly drawing His people into closer union with Himself, through divers means suited to their constantly varying needs and circumstances. It dispels many obscuring and distorting mists of age, and reveals in clearer light the kinship of our ancestors' spiritual struggles with those taking place to-day in our own lives.

The right or rather the necessity of applying "human canons of investigation," as we have attempted to show, has a basis in the conditions of knowledge. When we have grasped the fact that such conditions exist, and that even Special Revelation must come under them in order to have effect as a message to men, we have, I think, made one step towards calming the conflict between two equally earnest parties in our Church, and two equally worthy feelings in every earnest Christian soul: the feeling of reverence for the truth that has in a special way uplifted human souls, and the feeling that we must bring that truth into harmonious relation with the other matters and methods of certitude in our distinctively scientific activities.

J. A. SINCLAIR.

ON THE SO-CALLED "RAILWAY SPINE" OF ERICHSEN.

THE great increase in railway travel during the past fifty years has brought into notice a class of injuries that previously attracted but little attention ; injuries resulting from the accidents that it seems impossible to avoid as long as human beings are constituted as they are, with but limited powers of endurance, memory, and observation. These injuries may be classified as of two kinds, i. where some visible mischief is done, such as the fracture of bones, or the laceration of tissues resulting in the loss of limbs or the limitation of their usefulness or the destruction of life itself. ii. Where no apparent harm has been sustained at the time of the accident, or at most some trivial injury, and the person, after perhaps assisting in rescuing others, goes on his way and shortly after, it may be in a few hours, or not for several days, develops various nervous symptoms, the nature of which is obscure and their prognosis difficult. This latter class of injuries it is that forms the great bulk of claims for compensation, and from the difficulty of properly estimating exactly how far the sufferer is incapacitated from following his occupation or how long he will be unable to do so, great and unseemly conflict of medical opinion arises. If a man has a leg or arm broken or lost the medical attendant can approximately judge how long he will be laid up, and the patient can estimate what will be the pecuniary loss to himself from being unable to attend to his business during that period. Such injuries admit of but little difference of opinion on the part of the medical attendant of the injured person and the medical advisers of the railway company. The nature of the injury is perceptible to the observer, whose opinion is formed from the evidence of his own senses and not from the statements of the injured person, which can neither be contradicted nor confirmed by the observations of another. Yet a very large amount of the injury sustained in a railway collision, and that forms the basis of a claim for compensation from the Company afterwards, is of this kind, intangible, invisible, only

known to exist from the patient's own statements, sincerely believed in by his own sympathetic friends and attendants, sceptically regarded by those whose sympathies and interests are not enlisted, or rather, are opposed to the admission of their existence. These subjective symptoms, as they are called, consist of pains and aches in various parts of the body, peculiar sensations, such as numbness, tingling, hyperæsthesia or anæsthesia, paralysis, loss of memory, inability to attend to business, to concentrate the attention, sleeplessness, defects of vision or hearing, loss of virility, loss of self control, shown by undue readiness to give way to tears or laughter, depression of spirits, and various other symptoms indicative of nervous disturbance, but all presenting the same difficulty to the medical man that for his knowledge of their existence he is dependent upon the statements of the patient and his friends and not upon his own powers of observation. These symptoms often do not make their appearance at the time of the supposed injury, but are gradually developed afterwards and continue for an indefinite period of time, often for months or years, and resisting all treatment, recovery, when it does take place, being frequently rapid and complete and coinciding in a remarkable manner with the settlement of the claim made upon the railway company for compensation. It is this indefiniteness, this absence of evidence of organic injury that forms the difficulty in the way of diagnosis, that leads to such marked difference of opinion on the part of medical men, so often manifested to the discredit of the medical profession in the witness box.

The first work that attracted general attention to these obscure nervous results following railway collisions, consisted of six lectures on the subject, published by Mr. Erichsen in 1866. They were by him attributed to the concussion and shaking received by the spinal cord and its membranes as a result of the violent shock consequent on the sudden arrest of motion that occurs during a collision, and a subsequent low grade of inflammation in one or other or both of these structures. His views, elaborated in a later work in 1875 were generally accepted, and *Railway Spine and Concussion of the Spine*, became recognized ailments, though, as he pointed out, the condition is not peculiar to railway accidents but may occur from similar causes, however induced, such as a fall from a carriage during a runaway, severe blows

directly applied to the spine, injuries of distant parts of the body unattended by direct blows on the back, but affecting the spine through the general shock to the system, and sprains, wrenches or twists of the spine. Mr. Erichsen's opinions, elaborated with great ability and illustrated with numerous cases, became the standard authority upon injuries of this kind, and were generally accepted without question by medical men and by judges, lawyers and juries as the correct pathological explanation of the obscure conditions to which I am referring.* They gave a great stimulus to actions to recover damages which resulted in enormous expense to the companies involved. Many of these actions were no doubt honestly brought, but it is equally certain that many were fraudulent, since the ease with which nervous symptoms were feigned, and the difficulty and often impossibility of detecting the imposition opened the door to numerous dishonest attempts to extort money. Cases of this kind, in which large and successful claims for supposed permanent spinal injury were prosecuted, and in which immediately or shortly after a settlement had been arrived at, complete recovery ensued, became so frequent that the attention not only of the railway companies, but of surgeons in England, the Continent and America was directed to the matter, and the results of their investigations published in journals in the different countries have thrown a great deal of light upon the subject, and shown that real or organic injury to the spinal cord or its membranes is far less frequent than would be supposed from Erichsen's book. Unfortunately, these writings are scattered through different journals and inaccessible to most medical men, while Erichsen's lectures being published in book form and well known, influenced public opinion much more than other less known and consequently less read writings, though the ability of these authors entitled them to equal weight. In 1883, however, Mr. H. W. Page, the surgeon to the London & North Western Railway, published a work entitled "Injuries of the Spine and Spinal Cord and Nervous Shock" in which he embodied the results of his own

*Riegler gives statistics which show that since the passing of a law in Germany for the compensation of persons injured on railways, the number of injuries or complaints of injuries had enormously increased, and that moreover of thirty-six complaints after injury, no fewer than twenty-eight were of the back, while Page states that among his own cases more than 60 per cent. of the injured persons made some complaint at some time or other of having been hurt in the back.—Page. "Railroad Injuries," p. 26.

experience as surgeon to one of the largest and most important railways in England. He points out the lack of clinical and pathological facts to support Erichsen's theory, attributes the local symptoms, the pain in the back, and stiffness of the muscles to the direct effects of sprain of the ligaments and muscles of the spine rather than to injury of the cord itself, and the nervous symptoms to the mental emotion experienced by the sufferer, who is suddenly placed in an appalling situation in which he feels his utter helplessness to avert injury or to protect himself, and the general nervous shock thus occasioned, a condition which is often prolonged and maintained by the mental strain, incidental to the legal proceedings commonly taken to obtain compensation. In support of his position, he directs attention to the manner in which the spinal cord is suspended in fluid within its membranes and surrounded by a bony structure, flexible yet strengthened by numerous strong ligaments and so surrounded by powerful muscles that it would seem almost impossible that the cord should receive any injury without these structures being first the subject of it and to the probability that they will exhibit some indications of the injury such as pain and stiffness. Unfortunately in Mr. Page's first works, the tone was too much that of a special pleader, who was desirous to make out the best case possible for the railways, and to undo as far as he could, the mischief that he conceived had been done by the ready adoption of Erichsen's views. In a later work he is somewhat more temperate while maintaining the same opinion. Nevertheless, the prevailing opinion, I think, among railway surgeons is that Page is correct, and that so-called "Spinal Concussion or Railway Spine" does not exist as a distinct disease, that the various anomalous symptoms before referred to, where not simulated are due to general nervous disturbance brought about by mental conditions, such as a shock, emotion, anxiety as to the result of lawsuits, etc.

Where no outward sign of injury to the spine is present at the time of the accident, and no immediate evidence of lesions of the cord or its membranes, such as paralysis or modification of sensation or motion, neither our present clinical or pathological knowledge, based on the experience hitherto acquired, warrant us in attributing to gradually developed disease of the spinal cord (subacute myelitis) the anomalous nervous symptoms that to

gether constitute "Erichsen's Railway Spine," or (which is more important) in giving a prognosis of permanent disability and an early fatal ending. Yet such diagnoses and prognoses are not unfrequently made and that, too, in the courts under oath, the subsequent course of the case after a satisfactory compensation has been awarded by the jury, showing how grievously mistaken the medical evidence has been. One such case came under my own notice a few years ago, in which a noted New York expert gave a written opinion that the patient would probably live but a short time, and possibly lose his reason; yet in little over a year after, the patient had so far recovered as to be able to resume his employment, and is now (about four years after the opinion was given) in good health, and fully recovered from all symptoms of disease.

Admitting the difficulty of forming a correct judgment in these cases, of deciding whether any real and progressive lesion of the nervous system exists, and of deciding whether the case before us is one of real and permanent injury, or one that is likely to recover after the anxiety of a protracted law suit is over and a favorable verdict has been rendered, are there any means by which we can form a probable opinion, and what are they? I think our means of diagnosis may be summed up as follows:

I. The absence of any apparent injury to the spine adequate to cause disorganization or derangement of the cord, for it must I think, be admitted that the cord is so well protected that it is to say the least, most improbable that it can be injured without any visible injury to the spine.

II. The time of development of the disability. A man who at the time of the accident feels no ill effects and is able to move about and assist others is not likely to be suffering from organic lesion of the cord, and of special symptoms subsequently making their appearance, local pain and stiffness will probably be due to sprain or contusion; headache, loss of control of the emotions, loss of memory, and sleeplessness to the general shock to the nervous system. On the other hand a man who is stunned and helpless at the time, or who becomes unconscious or paralyzed within a few hours is probably suffering from hemorrhage on the cord or some direct lesion of its substance,

III. The nature of the symptoms; mere complaints of headache, sleeplessness, loss of memory, vertigo, stiffness and want of power of limbs, loss of sexual power, unless accompanied by visible changes, such as wasting of the muscles and loss of electrical reaction are not necessarily indicative of actual disease but may be assumed for purposes, not exactly of deception (for I am not here referring to malingering) but of increasing or exciting interest or sympathy, or they may be the natural outcome of the nervous shock received at the time of the injury, aggravated and maintained by mental influences of worry and anxiety consequent on protracted legal proceedings.

IV. The history of the patient both personal and family. When this shows a tendency to neurotic troubles, hysteria, neuralgias, etc., we should be doubly careful before we assert positively the existence of organic disease from subjective symptoms alone. In this respect the business circumstances of the patient, if known, would often furnish a valuable aid to diagnosis. A man, on the verge of insolvency or in business troubles that can only be warded off by his personal attention is very likely to have nervous symptoms increased by the fact.

V. Lastly there are certain diagnostic symptoms which can be discovered by careful examination of the various organs of the body, such as changes in the fundus of the eye indicative of degenerative change in the nerve structure; the so called reaction of degeneration, elicited by electrical tests, indicative of loss of responsive power in the muscles and degeneration of their substance; lessened or exaggerated tendon reflexes, etc. All these being evident to the senses of the observer are valuable aids in diagnosing real from simulated disease, but, as a rule, they require to be investigated by an expert, the average medical man having too little opportunity of practising these methods to be able to state their results with authority.

I have only one thing more to add and that is on the subject of prognosis. Too much care cannot be exercised in predicting the probable duration or result of a case of the kind here referred to. Railway medico-legal reports teem with cases in which surgeons have predicted permanent disability, early death, insanity, etc., with the natural result of large compensatory verdicts from

sympathetic juries, which predictions have been falsified within a year or two by the patient returning to health and occupation. A medical man is only justified in giving such an opinion where the signs of organic injury are marked and unequivocal. In most cases, where only symptoms of nervous disturbance are present, no matter how severe they are and how helpless the patient may apparently be, the surgeon will be justified in anticipating return to health more less complete, in course of time.

H. J. SAUNDERS.

When Pericles is too grave and silent, I usually take up my harp and sing to it; for music is often acceptable to the ear when it would avoid or repose from discourse. He tells me that it not only excites the imagination, but invigorates eloquence and refreshes memory; that playing on my harp to him is like besprinkling a tessellated pavement with odoriferous water, which brings out the images, cools the apartment, and gratifies the senses by its fragrance.

"That instrument," said he, "is the rod of Hermes, it calls upon the spirits from below, or conducts them back again to Elysium."

Come sprinkle me soft music o'er the breast,
Bring me the varied colors into light
That now obscurely on its tablet rest,
Show me its flowers and figures fresh and bright.

Waked at thy voice and touch, again the chords
Restore what restless years had moved away,
Restore the glowing cheeks, the tender words,
Youth's short-lived spring and Pleasure's summer-day.

THE LEGEND OF ULYSSES IN DANTE AND TENNYSON.

NO. I.

The birds' quiet singing, that tells us
What life is, so clear.
—The secret they sang to Ulysses
When, ages ago,
He heard and he knew this life's secret,
I hear and I know.—*Browning.*

Ulysses if not the greatest is the most interesting of the Greeks who went to Troy. He is also the best known. The legend of his life has come down to us in one of the world's noblest poems, the great sea-song of the *Odyssey*, the mellow essence of old Hellenic civilisation, written in the youth of the world but probably in the age of the poet, for it possesses in a more than ordinary degree the incomparable serenity of Greek wisdom and art.

There is a certain complexity in the character of Ulysses, a rich mingling of elements, which brings him more within the reach of our sympathies than the superb figures of Achilles or Ajax Telamonius, or Agamemnon, King of Men, with their colossal simplicity of action and motive. Ulysses in comparison is almost a modern. It is not only that he combines the heroism of the warrior with the sagacity of the counsellor. Even to Homer he is more than this. He is besides—the grand characterising stroke is given in the opening lines of the *Odyssey*—the man of profound and soul-subduing experiences, who has seen many cities and observed the different ways of men. He is the type of an intellectual curiosity in comparison with which that other ocean wanderer, the Æneas of Virgil, notwithstanding his “piety” is an almost colourless and insignificant conception. In Sophocles there is a further evolution of the conception of Ulysses. The great dramatist seems to find something in his character suitable for the expression of a critical and philosophical spirit, of a mind which has to some extent risen above the prejudices and the limited religious feeling of the ordinary Greek. In the *Philoctetes* he is perhaps something of the sophist, but he has something too of the

wisdom of the philosopher, of the sage follower of Athene Polias, guardian of states and civil order. Those words of his in answer to the imprecations of Philoctetes and the superstitious fears of the chorus are the calm utterance of a mind which has considered the conflicting claims of the state and of private morality, and is basing its resolution on a broader conception of moral law than they can understand :

"There is much I could say in regard to these charges of his, if this occasion were a fit one. But here a single word must serve me. Where the circumstances require such action as ye have seen, then I am such as ye now see me (*i.e.* a servant of the state using, as I have had to do all along, my intellect to overreach proud unmanageable heroes who would otherwise bring ruin on us all), but wherever the case to be determined regards righteous and honourable men, there could be found none more regardful of the divine laws than I."—(Philoctetes, 1047-50.)

And in the *Ajax*, Ulysses represents a still more positive advance beyond the ordinary limits of moral sentiment in the Greek. It is true that with all this there is a darker thread in his character, a preference for stratagem and finesse which is not far from love of them, and although this side is not strongly accented in the *Iliad* or the *Odyssey*, where perhaps the worst epithets attached to his name are those addressed to him half fondly, half-reproachfully by Pallas in the 12th Book, yet it is the side which is most conspicuous in his traditional achievements in connection with the Trojan war. And it is the side emphasised by the later poets, to whom he is little more than the personification of wile and stratagem.

The Latin poets, Virgil and Ovid in particular, darken and obscure the higher Homeric legend of the divine Ulysses, *δῖος Ὀδυσσεύς*. Virgil coins for him the harsh epithets, *scelerum inventor, hortator scelerum*, inventor of crimes, adviser of crimes; and Ovid besides borrowing the latter phrase presents him in the 13th book of the *metamorphosis*, as something resembling the Greek of the poet's own time, fluent in speech and artful, but not much better than a coward in action.

qui clam, qui semper inermis

Rem gerit, et furtis incantum decipit hostem.

It is true it is an enemy that speaks, Ajax, but that even an

enemy should speak so shows how decidedly the true Homeric legend of Odysseus, the great, the wise, the much daring and much enduring, had been overlaid with an inferior conception.

It is hard to say in what different forms the story of Ulysses reached Dante. He knew the Latin poets well, but Homer and the Greeks only as great traditions. Like most classical stories, the legend seems to have received considerable accretions of an incongruous or grotesque character from the wonder-loving mediæval mind, some of which, such as the story of the foundation of Lisbon by Ulysses, may have suggested to Dante the idea of a second voyage. That he took it from the prophecy of Teiresias in the *Odyssey* seems less probable. But however that may be, it is wonderful how the true features of the Homeric hero, the genuine ideal of the sea-farer Ulysses, appear again in Dante's picture of him. For one thing, the whole classical world, whether in myth, history, or legend, was equally and almost terribly real to Dante. Along with the contemporary history of Italy, that bitter little world of civic and political strife, it constituted nearly the sum total of human life with which he was intimately acquainted, with which his reason could deal freely and judicially. The two form the universe of facts on which he trains and exercises his judgment of life. The one, the world of Italy, he knows intimately by personal knowledge and sure tradition; the other, the classical world, distant as it is, is as distinct as contemporary fact for his imagination and is even more treasured as a part of human life which has been made permanent, lucid, and of ideal significance in the forms of art and literature. All outside is a world comparatively unilluminated or altogether obscure to him. So that he grasps that classical world and its figures, whether a legendary Capaneus or an actual Cato, with such fervour of imagination and insight, with such profound gratitude for its light and guidance, that every fact in it is instinct with life and meaning for him. And accordingly in that great series of dramatic monologues, the "Men and Women" of the *Inferno* and *Purgatorio*, the first type that his imagination calls up of any species of malefactor is always, if possible, a personage from the classical world. In this way he steadies his judgment amongst the distracting influences of personal and political sympathies or antipathies, and makes a moral

synthesis of the ancient and modern world which in some degree liberates and broadens his view of life.

Dante guided by Virgil has advanced into the Inferno as far as the eighth circle, which is divided into ten great pits each appropriated to a distinct class of those who have misused their intellect for malicious and fraudulent ends. As he comes to the eighth pit and standing on the sloping edge surveys its gloomy depths, he perceives innumerable moving shrouds of flame thick as the fire-flies that the Italian peasant sees of a summer-night in the valley where he is accustomed to labour; and each shroud of flame, as he guesses even before Virgil tells him, conceals a sinner, one who has abused his intellect in guileful deceits and stratagems. The sight of it is painful in his memory still. At the thought of it, he tells us, he puts "a rein on his intellect more than he is wont, in order that it should not run where virtue does not guide it, in order that if Providence has bestowed on him the blessing of intellect he may not turn it into a curse to himself."

Amongst these pillars of flame which sweep rapidly and silently past below him, he sees one advancing the flame of which is divided at the top so that it has a double peak,—like the twin flames on the funeral pyre of Eteocles and his brother, he thinks, remembering a passage in Statius which had evidently strongly affected his imagination to be recalled at such a moment. "Who is in that fire," he asks Virgil? And Virgil tells him, "inside of that Ulysses and Diomedes suffer, and thus together they run united in punishment as they were united in crime. Within that flame there is lamentation for the stratagem of the horse (by which Troy was taken) and the arts by which Deidamia lost Achilles and Troy its Palladium."

Such, as far as Dante has comprehended the teaching and theology of the doctors of the Church, is the inevitable place of Ulysses amongst the damned. Of the guilt there is no doubt. Does it not stand written and re-written in emphatic words in what for Dante is the highest authority, the *Æneid* of Virgil, *scelerumque inventor, Ulixes*? As for the punishment it is thus, as Dante has seen,—not degrading but exceedingly painful, the punishment of one wrapped in the hell-fire of his own eager scheming mind; and it could not be otherwise. For Dante however much he admires, or even loves and respects some of the personages he

meets in the Inferno never falters in his stern theological judgment of their sin and the place it condemns them to there. Even his old master, Brunetto Latini, himself a poet and philosopher, whom Dante addresses tenderly—O dear and amiable image of him who while in the world taught me how man is made eternal, *come l'uom s'eterna*—is there in the burning sand of the seventh circle, his face blasted with flame.

That is the theological aspect of Dante's judgments, stern, inflexible, minatory as a Hebrew prophet's for a thoughtless humanity which does not seriously realize the nature and pains of crime. Brunetto, the dear old soul,—he was born almost half a century before Dante, and must have been a very venerable image in the poet's mind,—had thought he was only "*un poco mondanetto*," perhaps a little.....! The apology might have passed readily with our nineteenth century Goethe, according to whom "the sins of poets are not deep" (*Dichter sündigen nicht viel*) but it is of no avail with Dante though he must have known it well. He looks sadly at his old master and says with grave surprise, Are you here, Ser Brunetto? The question and the surprise it implies, may be a kind of dramatic machinery, but there is little which is *merely* of that character in Dante and is not also attached to some underlying reality. It seems as if when the vision of this particular sin was strong upon him, Dante had realized in a flash, as it were, the truth of reports never perhaps before quite clear to him regarding that 'dear paternal image.'

Thick indeed is the veil which hides the reality of Dante's ideas from us, strange and alien to our ways of thought are the forms in which he expresses judgments which yet have a reality and meaning as deep as anything that could be said in this century of ours. That Dante should sit in deliberate judgment on the character of a fabulous Ulysses, a character appreciated by him only at second hand through the distorted versions of it given in the Latin poets, may seem in the last degree unedifying. But to Dante it is a problem of the profoundest interest, for Ulysses is the great prototype of these, and they are many, many as the fire-flies of a summer night in a Tuscan valley, who abuse the gift of intellect for purposes of wile or deceit. Amongst them are men of great gifts, not ignoble in character, heroic in action, persistence and endurance. Of such Dante perceives Ulysses to

be the classical type, and it is in language of unusual excitement that he begs Virgil to stay till that moving shroud of flame with its double peak come near them. Virgil replies that Dante's desire is a worthy one, and when 'the two-horned flame' is sufficiently near, he himself addresses the pair of Greek heroes Ulysses and Diomed whom it conceals. "O ye, who are two within one flame, if I have merited anything from you whilst I lived; if I have merited much or little (*assai o poco*, says Virgil, conscious no doubt of that *impius Tydides.....scelerumque inventor Ulixes*, and other hard epithets) when I made the lofty rhyme, (*alti versi*, clearly distinguished by Dante from his own plainer diction and humbler rhythms) do not move away, but *one* of you say where it was that he perished and came to meet his fate."

Virgil as usual has divined what Dante wanted to know. At his words the higher of the two burning peaks began to sway like a flame agitated by the wind, and a murmuring voice 'as if it were a tongue that spoke' came forth and told them of the last voyage of Ulysses.

Neither the sweet bond of a son, (it said) nor pious affection for an aged father, nor the love I owed Penelope, which should have made her days joyful, could quell within me the burning desire I had to see the world and the ways of men in their vice and in their virtue. But with a little band of companions who did not desert me, I set out in a vessel alone on the great open sea. We saw both coasts as far as Morocco and Spain and the island of the Sardinians, and the others that the sea washes round. And I as well as my companions were old and worn, when we came to that narrow strait where Hercules set up his pillars for a mark that men might be warned not to go beyond that. On the right hand I left Seville (note the haughty ellipsis I, Ulysses, disregarding the warning, continued my voyage); on the left, Cewta was already out of sight. O brothers, I said, who through a hundred thousand perils have reached the western bounds of the world, do not refuse to the little spell of waking life yet left us the experience of a world unknown to men. Consider the seed of which ye are (humanity *i.e.* highest of created things) ye were not made to live like the beasts (without ideals or aspirations), but to follow virtue and knowledge. With this little oration ("*orazion*," Dante does here, as once in a while, use the grand word instead of the plain one, because, little as it is, the speech is in 'high style' as Chaucer would say.) With this little oration I made my companions so eager to go forward that after it I could hardly have restrained them. And so, having turned the *stern* of the boat east, (Ulysses finds it impos-

sible to describe where the bow was turned to) we made wings of our oars for this wild flight (“*al folle volo*,” mad flight, conscious of venturing farther perhaps than is permitted to men) bearing always a little to the left in our course.

Ulysses then goes on to tell how they voyaged till they saw the southern stars, and had been five months on the great deep when a mountain appeared looming gray in the distance and of such height that he had never seen anything like it. They were in high spirits when suddenly joy was turned into wailing; for off that new land came a storm blast and struck the bow of the boat. “Three times it swung her round in a maelstorm, the fourth time her poop rose in the air and her bow went under—thus it was ordained—so that the sea closed over us.”

Here then we have something like a reconstruction of the Ulysses of the Odyssey, the man of heroic endurance and noble aspirations, ‘not born to live like a brute’, but with an intellectual curiosity, a divine thirst for knowledge and experience which the Sirens knew how to tickle cunningly in their song.* This is the other half of Dante’s judgment of the life and character of Ulysses, the free moral judgment which he puts in curious yet not altogether irreconcilable contrast to the theological judgment, reaching in this way beyond the limited theological ideas of his age yet keeping in conformity with them. It is this comprehensiveness which makes the *Divina Commedia* in spite of the narrowness and rigid limitations of its author’s theology, liberal, compassionate, human.

To Dante Ulysses is a solemn reality, a heroic life, yet doomed to never-ending pains for that misuse of the divine gift of intellect.

* *Ἀλλ’ ὅγε τερψάμενος νῆϊται καὶ πλείονα εἰδώς.*—Od. Bk. XII.

Ulysses! stay thy ship, and that song hear
That none past ever but it bent his ear,
But left him ravished, and instructed more
By us, than any ever heard before.
For we know all things whatsoever were
In wide Troy laboured; whatsoever there
The Grecians and the Trojans both sustain’d
By those high issues that the Gods ordain’d.
And whatsoever all the earth can show
T’inform a knowledge of desert, we know.

Chapman’s Transl.

Perhaps even that voyage, that 'mad flight' beyond the straits of Hercules is an act of temerity towards the gods, another product of that restless scheming mind not content with the limits which the deity has set for the world of men, and which the semi-divine Hercules has taken the trouble to mark for them, so that the storm blast must arise and the sea engulf him. That is what Dante sees Ulysses to be, an audacious man too disregarding of divine traditions, too unscrupulous in his ambition; unfit therefore notwithstanding his greatness for that honourable first circle of the Inferno where Homer is, '*l'altissimo poeta*,' and where Aristotle, 'the master of those who know,' sits 'in the midst of the philosophic family.' No love nor respect can rescue him from Malebolge, not even the charity of a St. Francis, for the black imp that drags men there is Rhadamanthine in his logic and, as that other sinner Guido da Montefeltro knows, bases himself irrefragably on the principle of non-contradiction.

Venir se ne dee giù tra' miei meschini,
 Perche diede 'l consiglio frodolente
Forse
 Tu non pensavi ch'io loico fossi*

And yet on the other hand Dante sees that Ulysses has also many virtues, that he is heroic in achievement and aspiration and resolved not to live like a brute, but to follow noble things and attain knowledge. We may understand that it is difficult for Dante, a man of the 13th century with a rigid theological system and a firm belief in the existence of hell and purgatory, to reconcile elements so conflicting and to give us any human and credible picture of a Ulysses at all. The theologian and the poet are at war in him here in a sort of opposition that he cannot altogether reconcile. The theological judgment remains to some extent distinct from the moral one, and different. But his merit as a poet and interpreter of life is that he feels and sees all sides, as comprehensively as we even now might feel and see them, and sets it all down reconciled or unreconciled.

This legend of Ulysses then as Dante has handled it contains a profound conception of life. It is the portait of a character powerful and heroic, but in which the good and evil elements are much mixed, and it is drawn on the whole with a freedom of judgment and a breadth of human sympathy which reach beyond

*Inferno, Canto 27, a good specimen of grim Dantesque humour.

the theological limitations and even the moral sense of that age. It impresses us with a curious sense of resemblance, at least of affinity to some of Robert Browning's studies in *Men and Women*, that of Andrea del Sarto, for example, Its artistic form, the dramatic monologue, is practically the same, it is similar in depth and comprehensiveness, and in spirit the difference arises rather from different theological conceptions than from a difference of the moral sense. Even the proportion of real and imaginative elements in their work must for both poets have been much the same.

Where Dante got the hint for his last voyage of Ulysses, whether from Homer or Solinus, is a question of little or no importance. It is sufficient in this respect that he is true to nature and has sympathetically divined the ineradicable instinct of the wandering Ulysses. But since he was not acquainted with Homer, the question where he got his high ideal of Ulysses as the man of profound experiences and of noble aspirations, the follower 'of virtue and knowledge' is of some significance; for to reach it amidst the inferior legendary matter, the base accretions of Ovid, the uncomprehending indifference of Statius with his cuckoo-like reiteration—*tarde reducis Ulixi*, and the curious frigidity, to say the least, of Virgil for the great Homeric hero of the Odyssey, even Dante, strong and loving as his grasp of that ancient world was, needed some direct help.

And there can hardly be any doubt that he got it from Horace, not Horace the Anacreontic poet of love and wine, who follows the rest of them with a new branding epithet of his own, *duplicis Ulixei*, but that wise counsellor of youth, the Horace of the satires and epistles, under which title, '*Orazio satiro*,' Dante gives him an honourable place amongst the virtuous ancients in the first circle. In the first of his epistles to Lollius, Horace explains the excellence and profound morality of the two great Homeric poems to the patrician youth who is just then giving, by way of elocutionary exercise, public recitations from them in Rome. Horace's lines are a good specimen of moral interpretative criticism and probably go a thought deeper than the exegesis of contemporary tutors, else he had hardly thought of sending them to Lollius. His characterisation of the Iliad is eminently Horatian, witty, sensible, but showing no great sympathy with all that heroic bustle of war and intrigue. "For all the delirium of the kings it is the people of the

Greeks that must suffer. Faction, stratagem, crime, lust and rage, outside and inside of Ilium there is sinning alike." But he recognizes with an accent of preference the serene wisdom and less troubled atmosphere of the Odyssey. In particular he revives with almost surprising clearness and depth that ideal of the divine Ulysses which inspires it, and which its heroic rhythm carries safely over the ocean of time, like the hero himself, *adversis rerum immersabilis undis*—not to be submerged in any billows of adverse fortune. The very first line is a scornful and emphatic flout to the baser legend which Roman *invidia* or mere want of insight may be giving too much countenance to—

Rursus quid virtus et quid sapientia possit,
Utile proposuit nobis exemplar Ulyssem.*

Then follows some lines which characterize finely and completely what is worthy and heroic in the life of Ulysses,

the conqueror of Troy, the prudent and observant man who had examined the cities and customs of many men, and while strenuously working a way across the wide ocean for himself and comrades, went through many a hardship, a man whom the billows of unpropitious fate could not overwhelm. You know, Lollius, of the Sirens' song and the fatal cup of Circe, of which had he been so foolish and greedy to drink as his companions were, he would have become the degraded and soulless slave of an impure woman, would have lived like an unclean dog, or a hog that wallows in the mud. Compared with him, we, in our day, are but cyphers and born to do nought but consume the fruits of the earth—*fruges consumere nati*.

A beautiful allegory! Lollius, from which you will learn more than from the ethics of Chrysippus and Crantor—so Horace says. I have no doubt that it is from these lines chiefly that Dante took the higher side of his conception of Ulysses. Every feature of Dante's Ulysses is to be found there, except the fraud, for Horace is thinking only of the Odyssey, while Dante, to whom the Ulysses of Homer, of Virgil, and of Ovid is no fable but a distinct reality, has to reconcile the different aspects as he best can. And his chief help is this passage of Horace. Every note of it has sunk deep into Dante's mind and is reproduced in his description of that last voyage sometimes with the candour of a great poet borrowing, sometimes with his power of transforming and re-issuing. It is curious that the latest commentator on Dante, Scartazzini,

*On the other hand he has set before us Ulysses as an instructive example of what valour and what wisdom can achieve.

should have missed such a probable reference. Horace's "*multorum providus urbes*", &c., gives Dante the key-note, "the burning desire which I had to get experience of the world and of the vices and virtues of men." Horace's "*virtus et sapientia*" is rendered in the same words in Dante's "*virtute e conoscenza*"; and the general force of the Horatian lines,

Quae si bibisset
Vixisset canis immundus, vel amica luto sus,
Nos numerus sumus, et fruges consumere nati.

is fairly interpreted in that 'little oration' of Ulysses to his companions, "Consider the seed of which ye are; ye were not made to live like brutes, but to follow virtue and wisdom."

It is curious to see how much nearer Horace is in his spirit and point of view to the 19th century than Dante. To the Latin poet the story of Ulysses is only a noble allegory, a legend from which he can with perfect freedom sweep away all baser overgrowths; but to Dante the life of Ulysses, alike on its brighter and its darker side, is too real for him to tamper with. The facts are there, undeniable, and he cannot, much as he admires the man, altogether follow the easy and benignant judgment of Horace. He even goes out of his way a little—giving thereby much trouble to commentators—to note that Circe with her glamour took a whole year and more from the hero,

Circe che sottrasse

Me più d'un anno là presso a Gaeta.

Between Virgil's character of him and Horace's in short, Ulysses is a difficult problem for Dante, a man not to be either wholly banned or wholly blest, certainly not quite an exemplar for Lollius and patrician youth, nor yet merely a warning. That picture of him on his last voyage, steering with heroic audacity to his fate over the western ocean, has to speak for itself, and give some relief to feelings, which remain to a considerable extent, unuttered and for Dante even unutterable—*ὦ πολυμήχαν, Ὀδυσσεῦ!* For Dante had an intense admiration for that strength of soul which does not turn aside either for ease or for danger, and disdains compromise as an incurable wound to its own vitality. The two men for whom he betrays a respect bordering on awe are both in the *Inferno* undergoing much the same painful though not degrading punishment,—Ulysses and the Ghibelline chief Farinata, who looked as if he held all hell in scorn,

JAMES CAPPON.

THE RELIGIOUS CONDITION OF CANADA.

(A PAPER READ TO THE EVANGELICAL ALLIANCE, CHICAGO.)

I have been asked to give an estimate of the character and movement of the religious thought and life of Canada, and in making the estimate to limit myself to the Protestant churches. The limit simplifies the problem. Of our five millions of people, fully two millions are Roman Catholics, and the great majority of these—French by race and language—would require separate treatment in any discussion. They were as completely cut off from France by the conquest of 1763 and by the French Revolution as they were from all currents of American life by distinctive institutions, laws and language which British legislation secured to them. They have in consequence remained—for good and evil alike—to a great degree unaffected by the modern spirit. Of the Protestants of Canada, more than nine tenths are Methodists, Presbyterians, Anglicans or Baptists, this being the order in the census; and as their historical evolution has been determined by a common environment and common causes, their general religious condition and movement can be traced without much difficulty.

Three events, subsequent to 1763, exercised a controlling influence on the Canadian people; the forced migration from the States into the different provinces of a hundred thousand Tories or U. E. Loyalists, at the close of the Revolutionary War; the voluntary migration from Great Britain and Ireland, chiefly in the second quarter of this century; and the political unification of Canada into a Dominion in 1867, followed by the opening up of the Northwest and the extension of the country to the Pacific.

The first event shaped our character in infancy. We sometimes speak of the United States as a new country, but it is of venerable antiquity compared with Protestant Canada. When the Republic began its national career, nigh 120 years ago, it had behind it then more than a century and a half of colonial life, the vigour and breadth of which may be estimated by its achievements and the character of the men it reared to begin and carry to a successful close the struggle with the mother-country. It counted three millions of people descended from the best stock in the world. It included a resolute maritime population, and had engaged in external wars. It had established schools, churches and universities, and its missionary and literary activities proved that it was not living for or by bread alone. But there were no English-speaking Canadians at that time, with the exception of a handful

in Quebec, Montreal and Halifax, and a few New Englanders settled on the farms of the dispossessed Acadians. Canada was an unbroken forest. It would have remained so until a slowly advancing line of population had gradually filtered in from the south, had it not been for the expulsion of the Loyalists at the close of the Revolutionary War. These men were a stiff-necked generation, who, rather than kiss the rod that smote them, sought shelter in the northern woods. They uprooted themselves, only to be planted in a soil unsuited to their habits and previous circumstances. They were isolated from their own past by civil war, and from European life by the ocean, and still more—in the case of the great majority—by their inland position. The memories of defeat and harsh treatment embittered the hard struggle for a livelihood. It is difficult to conceive of an environment less conducive to the promotion of a high level of thought and religious life; and the unprovoked invasion of 1812-15 made it less favorable still, except in so far as their gallant and successful resistance stimulated the nobler side of their natures, and inspired the hope of a future, under laws and institutions on the British model and adapted by themselves to their own needs.

The second event determined early Canadian character along the same lines as the first. Almost the entire immigration was from the mother-country. It consisted of classes who deliberately chose Canada as their home because it was British. Some of these were generously aided by the Imperial Government, and all spoke of their fatherland as home, and taught their children to regard it with affection. In their isolated condition, generally in remote backwoods, obliged to give all their thought and energy to provide for the simplest material necessities, they rested in old religious forms and traditions which their imagination glorified. These became accordingly channels from which their spiritual natures drank eagerly. In these they found "the true dignity and Sabbath of their life." They prized them for their own sakes and for the memories of the past, and they prized them all the more when their own tenacity was favorably contrasted with laxity and its evil results elsewhere. They had no conception that there was movement in the old land, and "innovation" seemed to them criminal. But neither traditionalism, however sincere, nor the consciousness of supposed religious superiority is favorable to religious or general progress. Unless absorbed in and purified by larger currents, they are apt to beget nothing nobler than fervent sectarianism, and prior to 1867 there was no national life in Canada. The maritime position and foreign trade of the provinces on the Atlantic stimulated thought, produced literature, and lifted the people to a certain extent out of provincialism, but their area was limited, and the movement of their population as well as of the immigration from abroad was to the west.

Internal development and external pressure led in 1867 to the union of the provinces, and a Canadian sentiment was born which has already had results. The Northwest was acquired and thrown open to the world; the national horizon extended from ocean to ocean; a self-reliant spirit, tainted too often by crude selfishness, but free at any rate from the coarse admixture of revolutionary violence, began to animate the people. In the wider outlook old religious differences shrivelled into insignificance, and old watch-words once thought sacred lost their meaning. In 1875 the Presbyterian churches, that had always divided, with a pathetic fidelity to the old land, along lines of cleavage that have actual significance in Scotland but only a sentimental reflection of fact in Canada, united into one church wide as the Dominion. The Methodist churches soon after took the same step. So did the Baptists and Congregationalists, as far as it was possible for bodies holding the principle of congregational independency to form ecclesiastical union. And in September, 1893, the Anglicans also united into a Canadian church, and at their first meeting the upper and lower houses unanimously accepted the Lambeth Articles as the basis for a proposed wider union. It would be difficult to overrate the significance of those great and peaceful union movements, and their effects have been marked.

From this historical sketch the present condition of our religious life can be understood and the direction of its movement estimated. With roots in a past almost wholly British, it as yet has been but faintly affected by that spirit of historical inquiry, under the dominant principle of evolution, which is quietly but profoundly modifying religious conceptions in Britain. Planted on the American continent, it has no connection with the political and ecclesiastical life of the United States. It has its own soil and atmosphere, and is confronted with only the first beginnings of those grave social problems of the city and the country which Dr. Strong depicts in his recent work, "The New Era."

What then is the result and what is the outlook? The condition of things on the surface is satisfactory. Church-going habits are universal. Family worship is generally observed. Family life is pure. Divorce is obtained only from the Parliament of Canada, a committee of the Senate acting as a kind of court, and the number of applicants for the whole Dominion is seldom more than two or three annually. The Lord's day is reverently observed in every part of the land. The ministry of the gospel is held in high esteem. A decent maintenance for the ministry is provided in every denomination, and candidates are so numerous that not only is the home field abundantly supplied, but large numbers of students go to seminaries in the States and assist the Church there in overtaking its immense field. Candidates for the ministry are

not supported by ecclesiastical or eleemosynary aid. They support themselves, like candidates for other callings. All denominations are actively engaged in foreign missions; Presbyterians in the South Seas, Trinidad, Central India, Formosa, Honan, and the Northwest; Methodists in Japan, the Northwest and the Pacific Coast, and among the Chinese of British Columbia; Baptists among the Telugus of India; Anglicans in Japan and the Northwest. The China Inland Mission and other undenominational agencies in Britain and the States attract many young men and women, unable or unwilling to take a university course, whose enthusiasm or ignorance impels them to volunteer for work in foreign lands.

The aspect of the people socially is also satisfactory. Sobriety is almost universal. An overwhelming public sentiment is in favor of temperance, while a vigorous section of the people demands total prohibition of the liquor traffic. Uncleanliness is a more common sin than drunkenness, but sins of darkness cannot be known as well as those committed in the light. Anti-Christian socialism and anarchism are unknown, and crime does not increase as rapidly as population. There is exceedingly little pauperism. Farm lands have indeed depreciated in value, but there is no experience of that depletion of the country and rural towns that is leading to religious deterioration in many parts of New England and elsewhere; and in our two largest cities, Montreal and Toronto, the great mass of the population still adheres to the church. Foreign immigration is small; population increases, but not by leaps and bounds; and the churches feel that they can cope with their work without undue strain or suspicion that their resources are exhausted.

It will be asked, Has this condition of things its roots in living faith, or is it an outward and traditional conformity which has been subjected to no strain? The question would be answered differently according to the point of view of the observer, his insight, and his opportunities for careful observation. Undoubtedly when we look at the whole field of life the signs are not equally satisfactory. But, true faith demands the allegiance of the whole man. It manifests itself in every department and knows no distinction between sacred and secular. There is then another side to the picture. Though our public men generally represent the best elements in society, the tone of political life is not high, and recent revelations show that there is a wide-spread corruption in the electorate. Again, we have produced no poetry or literature of first-class rank, though there is a school of young poets that gives promise. There is, too, a school of distinctively Canadian painters and some promise in music. What we have produced of distinctively religious literary work is inferior even to

what has been done in general scholarship, poetry, science, art and thought. Now, no amount of conformity or of external activity will compensate for the absence of that free creative spirit which is at once the proof and the condition of permanent religious vitality. Every country must take its share in the common burden and give its contribution to the solution of those problems, old as the race, which appear in new forms in every age, or accept the position of a mere dependent upon others and sink into spiritual decrepitude or petrification.

In describing the present religious state of Canada I have presented the two sides of the shield. In which of the two is to be found the key to its actual spiritual state? Neither in the one nor in the other solely, but in both combined and in a study of the conditions from which both have come. It seems to me that whoever considers those conditions carefully will be prepared to appreciate sympathetically all the excellence that is apparent on the surface and to believe that there must be living roots for so much that is good, and at the same time will be prepared to make full allowance for that lack which has been pointed out, and to believe that a cloud now on the horizon, small as a man's hand, will soon cover the heavens and give the land a plentiful rain. There has not been sufficient time for us to appropriate the thought and scholarship of the modern world, nor for that reflection which is needed for the production of literary work of the highest class, either in the department of pure thought or in its application to actual social, ethical, and theological questions. Our inner development has been slow, because of material and historical conditions, and also because it has not been hastened by revolution. This is not altogether a disadvantage, for the fruit that comes to maturity at the normal time is more likely to be sound and to last than that which has been forced.

It has to be admitted, then, that till very recently Canada was not in the main stream of the world's life. It is entering that stream now. The days of isolation are over. Canada cannot hold aloof even if she would, and her young men are too virile to shun the needed strain and conflict if they could. Canada has now made sufficient material and political progress to entitle her to take a place with full-grown countries, submit the reality of her faith to the tests that are applied everywhere else and prove her faith by works of the highest order. The questions that are being discussed in older and more crowded countries must be faced by the wise men and the young men of Canada, no matter what disturbance to deeply-rooted preconceptions may be the result. Movement in this direction has commenced already, as might be expected on the part of a truth-loving people coming into full consciousness of the meaning of the century in which it finds

itself. Our institutions of learning, with the exception of the small university of King's College, Nova Scotia, are of recent date, and they are now filled with men and a due proportion of women, who combine the self-control, reticence, and modesty begotten by conservative training, with love of learning and a deep religious spirit, and also with that freedom from routine and readiness to experiment that belongs to a new country. Students of such a type must have been brought up in homes where religion is a power. These homes are the glory of the land. Anchors cast there are sure to hold even when the earth seems to be removed and the mountains cast into the midst of the sea. Carlyle always assured his mother that his faith was essentially the same as her own, though the form was different. She knew that his word could be trusted, and he knew that her religion was the expression of living faith. It is this union of the old and the new, best found in the family, that is needed in the church. A conflict between them brings misery and loss to both, though the issue is always the same,—“the elder must serve the younger.” Why should there be conflict, when peace would be so much nobler? The old generation should not attempt to fetter the new, for that is to fetter God; and the new must not despise the old, for that is to despise their fathers as well as God.

The Protestant churches have not modelled themselves on the family. They were begotten of faith, and faith means the reconciliation of liberty and union in the atmosphere of love. But Protestantism in the church has been dominated by fear. It has been afraid of the body, afraid of the intellect and afraid of the imagination. It has been afraid of individualism and of socialism; of political life, of industry, and of amusement; of science and of art; of enthusiasm and of quietism: and the consequence is that it is called upon to face, in an utterly disorganized condition, the tremendous conflicts that are impending in almost every country.

I hope better things for my own country. But we must remember that principles and not protest gave victory to the Reformers, and that it was faith in the Evangel and not the mere denunciation of pious frauds that made them heroes. Their principles and their faith are all that are needed now, and they are needed by all who study God's Word with modern appliances and by the modern method, or who apply the gospel to the solution of to-day's social, economic, and international questions, or who seek to meet new conditions with new instrumentalities, without regard to weak and beggarly elements that have outlived their usefulness. There is faith in the heart of young Canada. This faith has been nurtured by godly parents, and therefore it is deep and strong. From quiet firesides, I believe, there shall come

forth to us "seven shepheds and eight principal men," that is, fit leaders in abundance as they may be called for; not only good citizens but God-fearing statesmen to guide us to the highest developments of national life and international duty; not only able ministers of the Word for thousands of congregations, but great teachers and prophets whose influence shall extend beyond the boundaries of their own church and land; not only scholars who are satisfied to walk along well-beaten tracks, but thinkers who are not afraid to sail strange oceans, that they may discover new worlds and map them out for the possession of future generations.

CRITICAL NOTES.

THE SPENSERIAN STANZA.

THE nine-line stanza in which Spenser wrote his *Faerie Queene* has a unique place in the history of English verse. We can trace all our other measures, blank verse, couplet, sonnet, song or ballad, to some imperfect and inchoate stage from which they develop by the successive efforts of great poets into polished and powerful vehicles for poetic thought. But the stanza of the *Faerie Queene* seems to spring a new and perfect thing from its author's brain, a marvel of originality and sweetness. Its principal merits as a metrical form are the following: First, its unusual compass, nine lines of harmonized rhythms which though they may be slightly broken and changed at certain parts of the stanza, in all the best stanzas constitute a rhythmical unity larger and therefore more capable of varied cadence than even the *ottava rima* or the seven line-stanza of Chaucer.

Take as a fair example the two following stanzas from the 2nd Book; the song the sirens sang to Guyon:

So now to Guyon, as he passed by
 Their pleasant tunes they sweetly thus applyde
 "O thou fayre sonne of gentle Faery,
 That art in mightie arms most magnifyde
 Above all knights that ever batteill tryde,
 O! turne thy rudder hitherward awhile
 Here may thy storme-bett vessell safely ryde,
 This is the Port of rest from troublous toyle,
 The worldes sweet Inn from paine and wearisome turmoyle."

With that the rolling sea, resounding soft,
 In his big base them fitly answered ;
 And on the rocke the waves breaking aloft
 A solemne Meane unto them measured ;
 The whiles sweet Zephyrus lowd whisteled
 His treble, a strange kinde of harmony,
 Which Guyons senses softly tickeled,
 That he the boteman bad row easily,
 And let him heare some part of their rare melody.

In the first of these stanzas there is the slight break at the end of the second line. After that it rolls in one magnificent rhythmical movement to its close in the long Alexandrine at the end of the stanza. And the rhyme system is cunningly devised to support this continuity of rhythm. That middle couplet rhyme (lines fourth and fifth), with the help of the final couplet rhyme, effectually saves the stanza from any tendency to break up into two isolated quatrains, as in the sonnet, and preserves its unity while relieving it from the monotony of alternate rhymes.

The second merit of the stanza is its melodious close in the long Alexandrine. A strong full close is necessary for a long stanza, and is of course even more imperative in the case of a nine-line stanza than it is for the *ottava rima* or the seven-line stanza of Chaucer. Spenser has simply strengthened the full close of the *ottava rima* in couplet rhyme by giving the last line two additional syllables. In any case the close in couplet rhyme is a favourite method of Spenser's. Even in the sonnet he prefers it.

Its third merit is a subtle power of adapting itself to continuous narrative. The Alexandrine at the close of the stanza has a curious double function. While on the one hand it brings to a full and beautiful close the rhythmical series of the stanza, on the other, it disposes the mind to revert, by a natural reaction, to the normal rhythm of ten syllables, to resume readily, as it were, the musical movement which for a moment it had gone beyond. The Alexandrine thus forms a much better transitional movement from stanza to stanza than might at first seem to be the case ; or rather, it *may* be thus used. Let any one consider for example the artistic effect of the Alexandrine as a transition in the two stanzas quoted above.

It is easy to see what an exquisite expression this measure is of the genius of the poet who created it. It is in perfect harmony with the rich languorous rhythm of his verse, the dreamy magic of his phrase, the delicately ideal and romantic colour of the world of the *Faerie Queene*. Although its beauty has lured more than one of our great poets to try its melodies, none has ever been quite successful in rivalling its fine cadences and long melodious movement. It remains, emphatically, Spenser's stanza. Byron with the coarse vigour of his rhythm and his rhetorical

accents is farthest from it; Keats, perhaps, with a poetic genius which has much affinity with that of Spenser, is nearest in his *Eve of St. Agnes*; for Thomson, though his rhythm in *The Castle of Indolence* is a closer imitation of Spenser, has not the fancy nor the same refinement of phrase.

But original as the Spenserian stanza is in its character, it must have some origin and ancestry, more or less definite. The common view used to be that Spenser took his stanza with some slight modifications from the eight-line stanza or *ottava rima* of Italian poetry. On the other hand Mr. Skeat is of opinion that it is derived from the very different eight-line stanza which Chaucer uses in the *Monkes Tale*, by the simple addition of the Alexandrine at the close. Of these two derivations, the older may not be quite an adequate statement of the case, but it is nearer the truth than Mr. Skeat's view.

The eight-line stanza of Chaucer is, comparatively at least, a metrical failure, used by him only in two unimportant poems and soon discarded for the far more graceful and powerful seven-line stanza. In the *Monkes Tale* we can see what the eight-line stanza is, and how well-advised Chaucer was in giving it up. Here is an example:

O mighty Cesar, that in Thessalye
Ageyn Pompeius, fader thyn in lawe,
That of thorient hadde al the chiuallrye
As fer as that the day biginneth dawe,
Thou thurgh thy knyghthode hast hem take and slawe,
Saue fewe folk that with Pompeius fledde,
Thurgh which thou putttest al thorient in awe.
Thanke fortune, that so wel thee spedde!

The defects of this stanza, as compared with the seven-line stanza and the *ottava rima*, are a want of compactness, a certain monotony of movement, and a weak close. No wonder then, what with the lugubrious nature of his matter and the want of vitality in the measure in which it is conveyed, the Canterbury Pilgrims soon have enough of the Monk and his tale. The knight brings him to a stop with a certain amount of courtesy on the score of the "hevinesse," that is, the sadness of his tale; but Harry the host's remarks are sufficiently significant as to the effect of the eight-line stanza on his not altogether uncritical ears:

Sir Monk, no more of this, so god yow blesse!
Your tale anoyeth al this companye;
Swich talking is not worth a boterflye;
For ther-in is ther no disport ne game.

By heven king, that for us alle dyde,
I sholde ere this har fallen down for slepe
Although the slough had never ben so depe:

And wel I wot the substance is in me,
If anything shal wel reported be.

The inferiority of the eight-line stanza of Chaucer is easily seen on analysis of its structure. It virtually consists of two quatrains loosely united by the rhymes of their first and last lines respectively, but really tending to remain asunder and independent on account of the isolating tendencies of two perfect quatrains. Chaucer often tries to bind them together by the use of overflow in the middle couplet, but in spite of his efforts the verse is incapable of the fine unity of the Spenserian stanza. It remains loose and monotonous in its movement. Besides it closes feebly on a single rhyme, while a stanza of such length requires the full strong close which both the *ottava rima* and the Spenserian stanza possess. Instead of being a musical climax, the eight-line stanza of Chaucer is with difficulty kept from anti-climax.

There is really nothing in it (for the similarity of the rhymes is only an external one) to suggest to Spenser his own wonderful stanza. Chaucer's seven-line stanza is fitter in its unity and flow to have been the model for Spenser. But it is more likely that Spenser got the hint for his stanza from the *ottava rima* of the Italians. Italian literature was all the vogue in his day, and Ariosto and Sannazaro were more spoken of in literary circles and even at the Universities than Virgil and Cicero. In Spenser in particular the influence of Ariosto is very obvious in his choice of materials and manner of treating his subject. Ariosto is in a strict sense of the word his model. There is a presumption therefore in favour, of Ariosto as regard his choice of the measure in which he wrote his great poem, and from Ariosto's *Orlando Furioso* or Pulci's *Morgante Maggiore* Spenser might well learn how to give his long stanza the fine unity, the varied cadences, and the full and perfect close which it requires. For Spenser and his contemporaries, Italian poetry was the only modern poetry of much account, and the *ottava rima* was the measure of the only modern epics they knew. It was natural, almost inevitable that Spenser should make it, or some modification of it, the measure of his *Faerie Queene*. In this sense, then, Spenser in all probability got the suggestion for his stanza from the Italian poets. English readers will find a good example of the *ottava rima* in Keats's poem of *Isabella*.

JAMES CAPPON.

BOOK REVIEWS.

A History of Mathematics. By Florian Cajori, Professor of Physics in Colorado College. MacMillan & Co., New York and London, 1894, pp. 422, 8 vo.

THE History of Mathematics, and especially of early mathematics, ought to be interesting to others as well as to the mathematician, as it is merely a history of human thought, and in this particular case a history of beginnings. Besides the history of mathematics goes so far back as to be almost synonymous with the history of the beginning of civilizations. The most ancient people of which we have any account, the Egyptians and the ancient Babylonians, had their systems of mathematics, which in many cases were undoubtedly handed down from still earlier races. Moreover there is no History better calculated than that of Mathematics, to show the effect of superstitious religious dogmas upon the progress of pure thought. The study of mathematics migrated from country to country according to the influence upon it of the theology of different countries at different times, and in this respect it differed from philosophy, which was always more or less identified with the religion of its time. Thus after the murder of Hypatia and the closing of the School at Alexandria by Christian fanatics, because they did not want Pagan teaching, and Pagan knowledge, mathematics betook itself to the east and was cultivated by both the Hindoos and the Mahommedans. And it was through these that it was preserved and from these that it was brought back to the Christian nations of Europe after the dark ages had passed away. Professor Cajori has told us all about these things in a most pleasant way, and the best we can say of the book is that it is more interesting than any novel.

McClure's Magazine. S. S. McClure, Ltd. New York and London.

McClure's Magazine for March is a clever mixture of grave and gay. A biographical sketch of Ruskin by M. H. Spielmann and a sympathetic estimate of the late Professor Tyndall by Herbert Spencer may represent the former element, while short stories by Octave Thanet and Rudyard Kipling are good examples of the latter. Kipling's story has the clear mark in its original conception of character and situation and in some strong phrasing of the man who wrote *Plain Tales from the Hills*; but the subdued Sterne-like treatment of sentiment is not so much in his line. Conan Doyle gives a sprightly account of whale-fishing in the Arctic seas; and the taste for knowledge of literary celebrities and that for criminal statistics, etc., are gratified by special articles. On the whole the contents are superior in interest to those of most American magazines; and the price (15 cents) is certainly very little for so much clever writing and artistic illustration.

CURRENT EVENTS.

MR. Gladstone, it is announced, has retired and thus brought to a close one of the most astonishing political careers of our time. Amongst modern statesmen he is perhaps the only one whose career may challenge a comparison with those of his great continental compeers, Bismarck and Cavour, both in respect of the extraordinary personal influence which he possessed with his party and the nation in general, and the profound impression which he has left on its political history. But the parallel can hardly be carried further. Both the Italian and German statesman entered upon their career with a definite political ideal before them, that of transforming a number of isolated and independent states kept asunder by traditional antipathies and the jealous policy of their more powerful neighbours into one great and united nation. Both accomplished their task, the German by profound and patient preparation, by wonderful tenacity and the prompt almost unscrupulous employment, when the long awaited hour had come, of a splendid military organization; the Italian, whose resources to begin with were much less, by patient and subtle diplomacy, by a profound and clever manipulation of the foibles or interests of his greater neighbours, and by allying himself with the ruling power at the right time,—the traditional policy of the house of Savoy. Both statesmen had to be eminently constructive in their action, both had to be masters of foreign policy, for at every step they took forward they put to the hazard the destiny of their nation and the lives of thousands of their countrymen; both had to be as conservative as the time and the previous history of their respective countries permitted them to be. And in the case of each statesman the whole nation may be said to have rallied confidently to the call of its great leader; and the steadiest elements in their following, after the hero-loving mob (not so great in Cavour's case, Garibaldi and Mazzini more than dividing the honours), have been the intellectual and the wealthy, the prudent and the practical amongst their countrymen.

The work of the English premier has been of a very different kind and presents on every side a strong contrast to that of his continental compeers. To begin with he was the statesman of an empire already built up, and strongly founded and fenced by a heroic race of statesmen and soldiers before he was born. When he entered upon his career the great problems of English politics were all of a constitutional and economical character. The great struggle of the new democracy against class privilege had begun,

and the formative period of his life as a statesman was passed amidst hot debates on Reform, on Franchise bills, on the Corn-Laws, on the Navigation Act, and the condition of the working classes. To such questions Mr. Gladstone has devoted the most of his energy, to the exclusion of foreign politics, which he seems all his life to have regarded with aversion, if not with indifference. His principal achievements in that sphere, such as the memorable appeal on behalf of the Italian patriots and the Bulgarian crusade, have been the personal achievements of Mr. Gladstone as an individual rather than of Mr. Gladstone, the premier. As to foreign policy, properly speaking, he has never had any, unless it were to avoid as far as he could all foreign politics, an excellent policy perhaps, if it can be safely carried out by an empire whose strength and prosperity depend very largely on the command of great ocean routes and distant markets. After he assumed the leadership of the Liberal party, an active foreign policy became the distinguishing badge of the Conservatives, and it was chiefly in foreign and imperial affairs that their great leader, the Earl of Beaconsfield, won his political laurels. But it must be recorded to Gladstone's credit, even by his adversaries, that he has not, especially of late years, allowed his own strong antipathies to interfere seriously with the character and continuity of the work done at the Foreign Office. The Earl of Rosebery, it is understood, has always had a comparatively free hand.

Meddling little with foreign affairs Gladstone has had the more time and energy to give to domestic policy. Since his accession to the Premiership we have had a series of great political changes with most of which Mr. Gladstone's name is so thoroughly identified that it may be said no other man but himself could have kept the Liberal party united in bringing them about. These are the Disestablishment of the Irish Church, the Irish Land Act, the abolishment of University rests, the establishment of the Ballot, the extension of the Franchise and lastly the sudden reversal of the traditional British policy on the question of Home Rule. The list itself explains sufficiently the kind of work Mr. Gladstone has performed. When the Reformed Bill of 1867 was passed by the Conservatives, the old Whig party had done its work and had practically ceased to be. Mr. Gladstone found himself at the head of a new party, the centre of which was composed of Liberals, mostly old Whigs of moderately progressive tendencies but the wings of which were formed by extreme groups each with its special cry, the Welsh and Non-conformist group with their cry of disestablishment, the advanced radicals with their cry of legislation for the masses and their diatribes against privilege and aristocracy; and, latterly, the Irish Home Rule members,

with their special cry of justice to Ireland. All Mr. Gladstone's great parliamentary dexterity and immense personal prestige have been acquired and employed in keeping these various sections of the Liberal party united in one forward movement. Some of his legislation, such as the abolition of Army Purchase and the Education Acts reflect particularly the path of progression favoured by the solid centre of the Liberal party. The rest of it represents more particularly the pressure of the extreme groups whose support is equally necessary to form his majority. Each of these extreme sections represents claims that require satisfaction as well as hatreds and prejudices that no British statesman can safely encourage. From this point of view some of Mr. Gladstone's sayings uttered in the heat of political campaigns may have been rash, such as his celebrated antithesis of "masses and classes," and his way of stirring up and appealing to the national prejudices of Scotchmen, Welshmen and Irishmen against English opinion. But we cannot see that his action has been so, at any rate to the same extent. Until the introduction of the Home Bill of 1886, his action has been the simple resultant of the various elements of the Liberal party which he led, the well calculated amount of concession which the centre of the party was disposed to make to its extreme sections. And in this way Mr. Gladstone has done work of great service to his country, easing the friction of classes, removing abuses, and giving natural and healthy play to the growing forces of democracy which might otherwise have risen into dangerous fermentation. There is no country where the interests of the working classes are so *effectively* represented, and there is no country where the working classes are so little subject to the illusory theories of extreme socialists and anarchists. The credit of this comparatively healthy state of things is due to Mr. Gladstone more than to any other man.

And his character has been formed by his work. His nature, always sympathetic and passionate, has been quickened by the constant championship of popular ideas into marvellous readiness of a response to all popular calls. His sympathies, his enthusiasm are evoked with perhaps dangerous facility, and seem of late years to have made his reason their servant rather than their governor. A popular cry has come to be the breath of life to him, and to stand, as I have seen him stand, in the Midlothian campaign of 1879 before tens of thousands of fervently admiring Scotchmen, denouncing in copious, fiery, impulsive language the crimes of a conservative ministry, and demonstrating the moral excellence of the Liberal programme from the re-distribution of constituencies to the guaging of ale casks, has become the characteristically great moment in his career.

I have forgotten the points of the oration, There was not a

sentence in it that Pericles would have owned either for matter or style ; but I remember well that sea of eager upturned faces in the Waverley Market, and that impulsive triumphant outburst of twenty thousand voices into the Marseillaise Hymn, as the orator took his place on the platform. As far as words went, the song was inarticulate as the bellow of ocean, probably not half of the audience having more than a hearsay acquaintance with it ; but the meaning of its music was clear to every heart, and the swell of that foreign democratic poean in the market place of the Scotch capital was more impressive than as I have heard it sung on a 14th of July eve by a Parisian crowd in the Place de l'Opéra. To these Scotch tradesman and shop-keepers it meant no doubt something less high-soaring and sanguinary, but what it did mean to them one felt was sure of its accomplishment between them and *him*. I remember, too, the figure of the orator himself, tall and distinguished looking in a suit of black and decidedly *simpatico*, as the Italians say, with a certain sympathetic attractiveness about him: his body was generally bent eagerly forward towards the audience and both hands raised high above his head with an impassioned minatory gesture, as if he were, as was generally the case, condemning to speedy extinction some relic of aristocratic oppression or class privilege. Such were Mr. Gladstone's legitimate triumphs, more genuine, I imagine, than the professional applause of his party, at least of late, in the House of Commons. Even to the critical and unsympathetic onlooker there was something touching in the relations between the speaker and his audience, something consolatory even to those who have their doubts about the judgment of the democracy. They could not be far wrong in their meaning, in their aspiration, he and they ; in their mutual intoxication of sympathy. But behind him stood the caucus leader, the manipulator of votes on the Disestablishment question and a score of Lilliputian wire-pullers who had their giant tied by a thousand threads, and who were already thinking how they could best exploit the sincerity of the moment.

It may be doubtful also if the applause of the populace is the best guide for the ruler. When the people cry out there is always a real grievance, a disease in the body politic, but the remedy they ask for is not necessarily the right one. Mere coercion may be no remedy, but neither may mere concession be. Until the Home Rule Bill of 1886, Mr. Gladstone's concessions had been mainly timely recognitions of the tendencies and growing strength of the democratic element in the nation ; but when, by the way of concession to the Irish vote alone, he ventured upon a fundamental reconstruction of the relations between Ireland and the Empire, he undertook a problem very different from anything he had hitherto attempted, a problem requiring the

highest constructive genius on the part of the statesman who dared to take it up. He has failed signally. It is not the House of Lords that has killed the Home Rule Bill. The House of Lords could not kill any bill which had the real force of the Liberal majority and the feeling of the nation to back it. It is the doubt, the faintheartedness, the lack of any genuine enthusiasm in the Liberal party itself with regard to the Bill, that has been fatal to it.

Mr. Gladstone's retirement will introduce a new era in English politics. The heterogeneous elements which have been kept together in the Liberal party by the prestige of his name, and a personal influence that extended all along the line of the party from the most cautious of the old Whigs to the most daring of the new Radicals, will hardly prove so tractable to Lord Rosebery, great as his reputation deservedly is; and we may expect a reconstruction of the parties in English politics at no very distant date. Chamberlain who was a real statesman of the Radical and reforming type, and not a mere democratic vote-catcher, might still be a reconciling personality, if he could find his way back to the fold.

THE condition of the Triple Alliance continues to be the chief political topic in Europe, especially in continental circles. Something has evidently happened to disturb the serenity and confidence of its virtual head, the German Emperor. Public opinion is probably right in attributing much significance to that almost solemnly public reconciliation of the Emperor and his former Chancellor which took place the other day. When such a pilot as Bismarck is called to the helm, or even only summoned aft to speak to the Captain, there are rocks ahead somewhere, and rough weather may be looked for.

It can hardly be that the late conjoint military demonstrations of France and Russia have produced this effect. The parade of the Russian squadron at Toulon was to be expected as a reply to the parades in Galicia and at Metz. The Czar is apparently very willing to give moral and diplomatic support to France in her isolation. It is obviously the only way of counterbalancing what would otherwise be the overwhelming weight of the Triple Alliance, not to speak of the casual support which it may give to and receive from England on certain questions. But between that diplomatic support and an alliance for aggressive war is a very long step. The Czar could not afford perhaps to see France further and permanently weakened, but there are profound dynastic and political sympathies between the Hohenzollerns and the Romanoffs which make it exceedingly improbable that the present Czar, who is old enough to have grown up under these traditions, would care to ride triumphant over German soil in

company with the republican armies of France. The *contrecoup* would be too severely felt in his own dominions.

On the whole it looks as if Emperor William's uneasiness arose from something which threatens the internal stability of the Alliance. And it can hardly be doubtful where the weak spot is. Austria and Germany are tied to their posts, the first by its position in relation to the Balkan states, the second by the always menacing phantom of a French war of revenge.

But it has always been a problem what Italy gained by entering into the Triple Alliance. She has nothing to fear from France. In spite of an irritable jealousy which exists between the two nations, unwisely stimulated by Italian talk about the primacy of the Latin races, especially by that foolish book of *Gioberti's Il Primato*; in spite of the remnant of a French clerical party that may still dream of a restoration of Papal Rome, and in spite of the periodical quarrels of French and Italian workmen on the Riviera, there is not the least ground for such a fear. Nor do the Italians themselves really have such a fear. The reasons for which Italy entered the alliance were obviously the positive gains she expected to make from it, for one thing, the formal honour of being recognized as a great power at international boards, the vanity of being a strong voice in international councils. But no solid or substantial advantage has she got from it. If she had visions of regaining Savoy and Nice and redeeming some or all of the other portions of *Italia Irredenta*, Corsica, Malta and the rest, the prospect of their realisation is at least, no nearer. She was not even able to save Tunis, on which she had her eyes, from the grasp of France. It is for an unsubstantial honour that she has burdened herself with debt and ground her citizens with taxation to support the unnecessarily large navy and army which are required not for her own needs, but for her place in the Triple Alliance.

There is no doubt that for a time the Italian people was pleased and flattered by the Triple Alliance. They had an exaggerated respect, it seemed to me at the time, for the new military glory of the German Empire. In allying themselves with it they followed too the traditional policy of Italy, defined long ago by Giucciardini, *va dove si vince*, "get on the winning side;" but they evidently counted upon something which has *not* happened. In the meantime their taxation is steadily increasing and their financial condition is becoming intolerable. Since Depretis, premier after premier has come and gone, none proving strong enough for the situation. Far better for Italy to have been content for a time with the position of a second class power, with moderate expenses and moderate taxation, to have grown gradually, and by the natural development of her industries and arts,

into the dignity of a great power capable of entering into alliances with great empires on equal terms and without ruinous sacrifices. Corsica, Nice, and the primacy of the Latin races, can afford to wait.

Signs are not wanting that the Italian people with its fine political instinct is slowly coming to this conclusion, which a positive solid minded nation of Saxon breed would have reached at the beginning. The curious feature is that Crispi who reappears with universal acclamation as premier at the present juncture, identified himself some years ago more than perhaps any other statesman with the policy of the Triple Alliance. Does he come back to preserve the stability of the Alliance, at least till 1898, or to perform a clever change of front; or simply as the strong man, most capable of doing the best that can be done, by Italian diplomacy and finesse, in either direction? At all events, it is clear from the tone of the Italian papers that he is *not* welcomed back as the Crispi of 1887, the open enemy of France and the uncompromising friend of the Triple Alliance.

J.C.

THE C. P. A., in what purports to be an official circular, contends that nearly all the public offices of any importance have become the property of Roman Catholics, that religious belief has become the test of fitness for subordinates, that contracts fall invariably into the hands of those who owe allegiance to Rome, that large sums of money are yearly given away to the Roman Catholic Church, while the Protestant Churches go a-begging, that there exists a conspiracy, masquerading under the joint cloak of loyalty and religion, to obtain entire control of the legislation and of the educational avenues of the country, and that a fully professed Roman Catholic ought to be barred from office, because he is by virtue of his faith a bad public servant. With regard to this unsparing attack on Roman Catholics and their Church the most striking point is that the exponents of C. P. A. principles are swayed by the very idea they condemn. They assume that creed is a necessary factor in politics, and object merely that the churches to which they belong are not a sufficiently pronounced factor. If every count of their heavy indictment were proved, we could hardly sympathize with an Association, which moans over being thrashed when its only hope is to administer the thrashing. The R. C. Church has doubtless some political sins to answer for. That the hands of protestant denominations are not clean in the matter of secret political influence, it scarcely needed the formation of the C. P. A. to prove. Of course two

wrongs do not make a right, but only magnify the evil. When we admit that the straining after power in politics is a fault common to the two great religious sects in Canada, we will be more concerned ourselves to see clearly, than to take the mote out of the eyes of our Roman Catholic countrymen. The Canadian Protective Association would best protect Canada from religious intolerance by first quietly putting itself out of the way.

It is a sign, not altogether hopeless, of our condition as a people that any society, which now seeks to make an impression, must announce its patriotism. Hence the P. P. A. changes its name to C. P. A. It would be more hopeful if the change of name carried a change of purpose. We may still fear that the Association, to use its own rhetoric, has put off the cloak of religion in order to masquerade in the cloak of loyalty. It was a small compliment to the other beasts, when they were unable to recognize the tones of the donkey because it wore a lion's skin; and it would be an equally small compliment to Canadians to suppose that they could be hoodwinked into believing that a society founded upon dissension, not to say hate, could promote national unity. Unanimity indeed is to be desired, but it would be purchased too dearly by the sacrifice of all who differ from us in points of religion.

The strength developed by the Patrons of Industry is an indication that farmers are taking a deeper interest in politics; and there are signs that this interest in politics implies an intelligent interest in the welfare of the country. Against one thing, however, the Patrons must be on their guard. It is the besetting weakness of an independent that he seeks to join with another independent, though the political ideas of the two may be as far asunder as the poles. With independents it is too often an afterthought that a new political association which must of course begin by being independent, might in office be more objectionable than either of the existing parties. Such a new society is the C. P. A. It is no mark of real independence in the Patrons to regard the C. P. A. as having the same right to exist politically as any inoffensive private Roman Catholic; nor is it any mark of real independence that a Patron may be a member of the C. P. A., though he must not be either a Liberal or a Conservative. The Patrons are strong enough and sound enough to carve their way without making illicit offers of friendship.

Ontario has declared in favour of prohibition by a majority of 80,000, and Manitoba and Nova Scotia are of the same mind, but the majorities, large though they are, hardly represent the

strength of the temperance sentiment. Many voted 'No' who, though clear as to the need of reform, are opposed to prohibition, while many believers in reform abstained from voting. Notwithstanding the popular majority in favour of direct prohibition, a wise and cautious government will regard a prohibitory law as something to be approached rather by carefully graded legislation than by a spurt. The people ought to be satisfied in the first instance by a law which will make intoxicating liquors difficult to be procured by those injured by their use. Probably with experience of the working of such a law it will be found that what was really wanted has been obtained, and that our legislators were justified in refusing to give unreserved sanction to a sentiment which, though noble, has still to free itself from traces of fanaticism.

In Ontario women have already voted in a provincial matter, and the *GLOBE* seems to be feeling its way towards making the enfranchisement of women a plank in the policy of its party. Before the recent prohibition plebiscite was taken, the opponents of the enfranchisement of women argued that the result would be practically useless, because the women, not one of whom has a vote in provincial elections, would be all on one side. After the plebiscite, they maintained that the extension of the franchise to women was valueless, because the women's vote was divided and did not seriously modify the vote of the men. Such facile reasoners can easily blow hot and cold out of the same mouth. But the real question is not what majorities the women would swell or diminish, but are they interested in public affairs? The signs of the times seem to be answering more and more plainly in the affirmative. If so, it is only a matter of time when Ontario will follow in the footsteps of New Zealand. S. W. D.

THE Wilson Bill, after getting through the House of Representatives in a fairly complete shape, has fallen among enemies in the Senate. The alterations which it is suffering there rather favour the suspicion that the senators, especially the Democratic senators, have had access to information and arguments which are not appreciated by the average citizen. But, whatever the nature of the information and arguments which influenced the senators, the outcome has been a triumph of special interests over public interests. Special trade corporations are alive, active, intensely interested, and have their energies directed towards one definite purpose. The public is indefinite, clumsy, composed of many conflicting interests, and expresses itself through representatives who are not likely to be so vigilant in the public interest as the representatives of the corporations are in their interests. Besides, where the people are themselves divided on any question

there is much scope for the free play of selfish motives among the politicians. Conscience can be argued with and remorse eluded even by fairly respectable politicians who undertake, for a consideration, to vote for that which they cannot at heart agree with, but which many of their constituents believe to be good. These men are not afflicted with Kant's reverence for the moral law in the abstract. Virtue may be its own reward for one who is doing what he is sure is right, but there are other rewards which are a fairly good substitute when one is doing what others are sure is right. The senators may indeed have been as pure as snow in their motives for altering the Wilson Bill. In which case it is merely a curious coincidence that the chief alterations in the bill should have been in favour of great trusts, able and not unwilling, where necessary, to supply aids to intelligence. We are not of those who condemn trusts in the abstract. There are undoubtedly many good features connected with them which have yet to be recognised. But the good features are dependent upon the saving which the trusts are able to effect in the present wasteful methods of producing and selling goods. But saving is not encouraged when the government deliberately votes to the trusts a large subsidy to be drawn from the people's pockets, as is the case when they are favoured with a protective tariff in addition to the monopoly advantage which the trusts create. A low tariff or free trade will not destroy trusts, it may even increase their numbers, but it will give to their activities a legitimate direction; for they must then exploit nature instead of their fellow citizens. The leading amendments which the Senate has made in the Wilson Bill certainly favour the evil features of the trusts and weaken their good features.

The Income Tax measure which is associated with the Wilson Bill is intimately connected with many important issues past and future. The protective system of the United States imposed an excessive tax on the people. The country being large and wealthy the returns were proportionally great. But the wealth did not all go to the protected capitalists, or become absorbed in the immense waste of capital and energy owing to the unnaturally laborious and costly methods of supplying wants which a protective system makes necessary. A portion of the tax collected went into the national treasury; but that portion had no relation to the needs of the government. It proved to be very much too large for all the legitimate purposes of even a government. A surplus began to accumulate, which reached such unusual proportions during Mr. Cleveland's first administration that it threatened to interfere with the free use of the nation's currency. Mr. Cleveland proposed the natural remedy of lowering taxation,

and the Mills Bill sought to effect it ; but the Senate—friend of the national infants of industry—threw it out. In the next campaign these venerable infants raised their perennial wail at the prospect of being weaned, with such unanimity and pathos that the national heart was touched and responded to their cry. The surplus having proved dangerous to protection had to be got rid of. There being no natural outlet for it, unnatural ones had to be provided. The end was achieved with a promptness and success quite unusual in government measures. Mr. Harrison and his friends entered on his presidential term with a treasury bursting with an accumulation of hundreds of millions ; his last few months of office were rendered uneasy from the fear that he might be driven to adopt extraordinary financial methods to get money for the most pressing current expenses. But the Republicans not only squandered that immense hoard, they did what they could to settle the surplus problem for ever. They incurred permanent obligations which require a greatly increased annual outlay. They turned the surplus into a deficit, and now additional means of raising revenue must be sought. Direct taxation best adapts supply to needs, and an income tax, when properly graded, is theoretically both fair and safe. Practically the problem is ; can an income tax be equitably levied and collected ? That depends on the economic condition of the country and the honesty of the people. Modern production and exchange are so complex, the ramifications of trade and capital are so subtle and wide spread, that individual fortunes no longer have the distinctness and local limits which they used to have. They are merged in the general capital of the country, and the individual himself ceases to know what he is worth or what his net income is, since so much of a business man's income is the passing of portions of his capital through his hands. But, if the individual himself cannot separate the bone and marrow of gross and net income, how can a tax assessor do so, even if armed with the most extravagant powers of inquisition ? Experience shows that personal honesty cannot be depended on, because, in the matter of taxation, many men have no honesty, and the others exhibit theirs in its least sensitive condition. On the other hand the income of those receiving salaries of a public nature can be accurately determined and the full tax levied. The result is that in practical operation now-a-days the income tax is one of the most inequitable that can be levied, and so it will certainly prove in the United States.

ONCE more a final settlement of the Manitoba School Question has been reached, this time by the judges of the Supreme Court of Canada, to whom the matter was referred. For the sake of peace and quietness and the avoidance of those unpleasant-

nesses which arise from racial and religious jealousies, it were well if the matter could only remain settled. But, unfortunately, there are already signs that indicate a re-appearance of the whole question in as lively a form as ever. Taking the last decision of the Supreme Court, we observe that three of the judges upheld the rights of the Manitoba Legislature in the matter of its school acts, while two of the judges denied these rights. Looking at the grounds which they gave for their several opinions in the light of the B. N. A. Act, one cannot but feel convinced that each of the two opposite opinions is legitimate from a certain point of view. The majority opinion, following the practice of the higher British courts and especially of the Judicial Committee of the Privy Council, takes account of national progress and expresses the spirit of the constitution rather than its letter, while the minority opinion expresses the strictly judicial view which looks to the letter alone. Considering the number and variety of constitutions under which our country has been governed since the conquest, we might almost claim to rival in this line the liveliest South American republics. This variety has been plainly due to a lack of statesmen in Canada itself, and ignorance of colonial conditions on the part of the British Government. In lieu of statesmen Canada has had to be content with politicians. But politicians have little interest in either past or future. For them the present is all-important. They live from hand to mouth, and frame new constitutions, not with a view to the essential features of national development and greatness, but with a view to the settlement of temporary political disturbances due to sectional jealousy, party conflicts, government corruption and oppression, or political dead-lock. The B. N. A. Act is not so bad as some that have preceded it ; but lack of statesmanship in its construction is very evident from the short sighted, unworkable and temporary elements and purely sectional interests which it contains. Among the latter are the clauses of the ninety-third section relating to education, in which, among other defects, the constitutionally absurd position is taken that a provincial legislature may pass laws of a certain nature but is not at liberty to repeal them. As though a legislative body which could not be trusted to repeal its own laws could be trusted to make them. But, such features being in the constitution, they cannot be ignored by judges who do not consider it their duty to determine whether the law is good or not, but simply to determine what it is. On this ground the two dissenting judges are justified in their opinion. But if it is the privilege and duty of the highest courts to consider what is the spirit of the constitution and what is agreeable or contrary to that spirit, then the decision of the three judges upholding the validity of the Manitoba school legislation is quite justified. In

this special case there were additional reasons why the court should take a liberal view of its powers. The question to be decided was not wholly legal but partially political, and was transferred from the government to the court in order to avoid inflaming party politics with delicate issues involving religious and racial differences. If we are to retain our present constitution and still make progress a free interpretation of its clauses is indispensable.

CONTRARY to common expectation the stoppage of the monthly purchases of silver by the United States Treasury, and the restriction on the free coinage of silver in India have produced no disastrous consequences throughout the world. They do not seem to have affected in any perceptible degree the steady decline in the value of silver which has been going on for a number of years. That decline is due simply to a lowering of the cost of producing silver. So long as the cost of producing silver continues to fall and no monopoly combination is formed among the producers, the price of silver is absolutely certain to fall also, and all the governments in the world could not prevent it by simply increasing their purchases. The attempt to keep the price of silver considerably above its cost of production by increasing the purchase of it is exactly on a par with the attempt to dry a square yard of the ocean's bed by pumping the water off it. To accomplish the latter object one must absorb all the silver that can be produced by the floating capital of the world, for the profits of producing silver being kept so much greater than the profits of producing other articles would sooner or later attract all the floating capital to its production. It is a mistake to suppose that at any time the price of silver was really being kept up by the monthly purchases of the United States Treasury. As a matter of fact these purchases were hastening its decline. It is a well exemplified fact in commerce that when the sale for an article is considerably increased and the field for the employment of capital in producing it is enlarged, there result improved methods of production, greater use and specialization of machinery, the discovery of new processes, new sources of raw material, etc., all of which lower the cost of production, and a fall in the selling price follows as a natural consequence. Doubling the demand for cotton or iron almost halves the price; and so it is with other articles in greater or lesser degree, when the raw material is not too limited relatively to the need for it, and there is now no danger of that in the case of silver. We may safely predict that if any international attempt is made to raise and permanently maintain the price of silver, it will have just the opposite effect, and that in a very short time.

SURELY if the gods take any interest in Canadian affairs they must find abundant occasion for laughter or for tears, according to their point of view, in the capers which our politicians cut before the face of heaven. Take, for instance, the position of the government with reference to the proposed Atlantic and Pacific steamship lines, which are now receiving so much attention. Steamship lines, ocean cables, and other aids to international trade must ever be welcome to free traders, or to those who believe in a moderate tariff for revenue purposes only. The aim of each of these classes is to stimulate international trade in both exports and imports—exports of what we can most easily produce and imports of what we can less easily produce. Not national independence, but national interdependence is regarded as the proper ideal; hence the desire for free and direct intercourse. But it puzzles one to discover what a protectionist can find to admire in the development of international trade facilities, unless, perhaps, as merely fashionable and ornamental fringes for the national skirts. And, indeed, if we take note of the way in which the politicians refer to these things, this latter idea becomes rather more than a suspicion. The government way of explaining the situation in the concrete language of fact may be condensed thus. We are bound to establish new and fast lines of steamers on the Atlantic and Pacific. At the same time protection to home industries, both actual and prospective, must be firmly maintained. The ideal sought is as complete a discouragement as possible of most imports. This of course, so far as successful, will discourage exports too, by preventing a natural return for them, and by causing the shipping companies to charge higher freights when there is so little for them to carry, especially on the incoming trips. But as we anticipate very considerable success in our restriction of foreign trade, it must be obvious that, even charging the highest rates practicable, the companies will require very large annual subsidies. These we propose to pay out of the fine, which we shall collect from those who still persist in using the steamer to import foreign wares. So, you see, even if we gave up the protective idea—which God forbid—we should still have to collect these fines in order to make up the subsidies which are themselves made necessary by reason of collecting the fines. Quite so we say. And what about those other steamship lines which are already serving the country, and which have to charge higher than normal freight rates on account of your successful restriction of trade? That, says the government, we are just about to attend to. We propose to regulate and reduce their rates by law, for the benefit of exporters. Remarkable country this, we say; and the gods laugh or weep according as the humour or pathos of the situation strikes them.

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PUBLISHED FOR THE COMMITTEE BY
THE NEWS PUBLISHING HOUSE
KINGSTON, CANADA

SINGLE COPIES, 30c.

PER ANNUM, \$1.00

QUEEN'S QUARTERLY,

PUBLISHED JULY, OCTOBER, JANUARY AND APRIL,

UNDER THE AUSPICES OF ALUMNI AND FRIENDS OF QUEEN'S UNIVERSITY, KINGSTON, CANADA.

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